

LANCASTER COUNTY

COUNTY - CITY BUILDING Telephone: (402)441-7410
LINCOLN, NEBRASKA 68508 FAX : (402) 441-6513
BOARD OF COMMISSIONERS

**IT IS THE VENDOR'S RESPONSIBILITY TO CHECK
FOR ADDENDUMS PRIOR TO SUBMITTING PROPOSALS**

NOTICE TO BIDDERS SPECIFICATION NO. 05-281

Lancaster County intends to enter into contract and invites you to submit a sealed bid for:

CONSTRUCTION OF COMMUNICATIONS TOWER AND PRE-FABRICATED BUILDING

MEETING OR EXCEEDING LANCASTER COUNTY'S SPECIFICATIONS

Sealed bids will be received by Lancaster County, Nebraska on or before **12:00 noon, Wednesday, November 30, 2005**, in the office of the Purchasing Agent, **"K" Street Complex (SW Wing), Suite 200, 440 So. 8th Street**, Lincoln, NE 68508. Bids will be publicly opened and read aloud in the First Floor Conference Room at the "K" Street Complex.

Bidders should take caution if U.S. mail or mail delivery services are used for the submission of bids. Mailing should be made in sufficient time for bids to arrive in the Purchasing Division, prior to the time and date specified above. Late bid will not be considered.

Bid Specification and initial bidders list may be down loaded off the City/County Purchasing Division web site at: www.lincoln.ne.gov , search "Bid", select current year, select bid specification listed above.

FAX bid responses are not acceptable, all bids must possess an original signature and be in a sealed envelope.

COMMISSIONERS

*DEB SCHORR * LARRY HUDKINS * RAY STEVENS * BERNIE HEIER * BOB WORKMAN
KERRY EAGAN, Chief Administrative Officer*

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SEALED BID

SPECIFICATION NO. 05-281

BID OPENING TIME: 12:00 NOON
DATE: Wednesday, November 30, 2005

ADDENDA RECEIPT: The receipt of addenda to the specification number _____ through _____ is hereby acknowledged. Failure of any bidder to receive any addenda or interpretation shall not relieve the bidder from obligations specified in the bid request. All addenda shall become part of the final contract document.

The undersigned submitter, having full knowledge of the requirements of Lancaster County for the above listed construction project, the Contract Documents and all other terms and conditions of the request, agrees to provide the labor, certificate of insurance, unemployment compensation, performance and payment bonds, materials and equipment in strict accordance with the plans and specifications as prepared by the County for the consideration of the amount set forth in the following price schedule:

CONSTRUCTION OF COMMUNICATION TOWER AND PRE-FABRICATED BUILDING FOR LANCASTER COUNTY

LUMP SUM OFFER - TOTAL PROJECT: \$ _____

Written: _____

Total number of consecutive calendar days to complete the project: _____ **Days**

A 5% bid bond is required with your response.

**NOTE: RETURN 2 COMPLETE COPIES OF BID OFFER AND SUPPORTING MATERIAL.
MARK OUTSIDE OF BID ENVELOPE AS FOLLOWS: SEALED BID FOR SPEC. NO. 05-281**

The undersigned signatory of the bidder represents and warrants that he has full and complete authority to submit this offer to Lancaster County, and to enter into a contract if this offer is accepted.

COMPANY NAME

BY (Signature)

STREET ADDRESS or P.O. BOX

(Print Name)

CITY, STATE

ZIP CODE

(Title)

TELEPHONE NO.

(Date)

FAX NO.

**EMPLOYER'S FEDERAL I.D. NO.
OR SOCIAL SECURITY NUMBER**

Email: _____

BIDS MAY BE INSPECTED IN THE PURCHASING DIVISION DURING NORMAL BUSINESS HOURS, AFTER TABULATION. IF YOU DESIRE A COPY OF THE BID TABULATION TO BE MAILED TO YOU, YOU MUST ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE WITH YOUR BID. Bid tabulations can also be viewed on our website at:

GENERAL INFORMATION

1. **BOND REQUIREMENTS:** 5 % of total lump sum offer as indicated on the bidding schedule
2. **INSURANCE REQUIREMENTS:** See "Insurance Requirements for All County Contracts"
3. **SAMPLE CONTRACTS:** The enclosed contract, successful bid and addenda provided to the County by the Contractor shall comprise the entire contract of the parties.
 - 3.1 No change in, addition to, or waiver of any provision of this contract shall be binding unless it is in writing, signed by both parties, and added to this contract as an amendment.
 - 3.2 All other expenses incurred in the implementation and operation of the services provided not mentioned herein shall be borne by the contractor.
 - 3.2 Any and all contractual agreement(s) generated as an outcome of this Bid process shall not be assignable by the Successful Contractor without written permission of the Lancaster County Board of Commissioners.
4. **CONTRACT TERM:** Shall be negotiated between the Successful Bidder and Lancaster County and shall be mutually agreeable.
5. **INQUIRIES FOR INFORMATION:**
 - 5.1 Technical Related: Ray Ryan
Radio Maintenance
2540 Fair Street
Lincoln, NE 68503
(402) 441-8425
Email: rryan@lincoln.ne.gov
 - 5.2 Bid Related: Kathy Smith, Assistant Purchasing Agent
"K" Street Complex, Suite 200
440 So. 8th Street
Lincoln, NE 68508
(402) 441-8309
Email: ksmith@lincoln.ne.gov

INSTRUCTIONS TO BIDDERS

LANCASTER COUNTY, NEBRASKA PURCHASING DIVISION

1. BIDDING PROCEDURE

- 1.1 Bidder shall submit two (2) complete sets of the bid documents and all supporting material. All appropriate blanks shall be completed. Any interlineation, alteration or erasure on the specification document shall be initialed by the signer of the bid. Bidder shall not change the proposal form nor make additional stipulations on the specification document. Any amplified or qualifying information shall be on the bidder's letterhead and firmly attached to the specification document.
- 1.2 Bid prices shall be submitted on the Proposal Form included in the bid document.
- 1.3 Bidders may submit a bid on an "all or none" or "lump sum" basis, but should also submit a quotation on an item-by-item basis. Bidding documents shall be clearly marked indicating the kind of proposal being submitted.
- 1.4 Each bid must be legibly printed in ink or by typewriter, include the full name, business address, and telephone number of the bidder; and be signed in ink by the bidder.
- 1.5 A bid by a firm or organization other than a corporation must include the name and address of each member.
- 1.6 A bid by a corporation must be signed in the name of such corporation by a duly authorized official thereof.
- 1.7 Any person signing a bid for a firm, corporation, or other organization must show evidence of his authority so to bind such firm, corporation, or organization.
- 1.8 Bids received after the time and date established for receiving bids will be rejected.

2. BIDDER'S SECURITY

- 2.1 Bid security, as a guarantee of good faith, in the form of a certified check, cashier's check, or bidder's bond, may be required to be submitted with this bid document, as indicated on the Proposal Form.
- 2.2 If alternate bids are submitted, only one bid security will be required, provided the bid security is based on the amount of the highest gross bid.
- 2.3 Such bid security will be returned to the unsuccessful bidders when the award of bid is made.
- 2.4 Bid security will be returned to the successful bidder(s) as follows:
 - 2.4.1 For single order bids with specified quantities: upon the delivery of all equipment or merchandise, and upon final acceptance by the County.
 - 2.4.2 For all other contracts: upon approval by the County of the executed contract and bonds.
- 2.5 County shall have the right to retain the bid security of bidders to whom an award is being considered until either:
 - 2.5.1 A contract has been executed and bonds have been furnished.
 - 2.5.2 The specified time has elapsed so that the bids may be withdrawn.
 - 2.5.3 All bids have been rejected.
- 2.6 Bid security will be forfeited to the County as full liquidated damages, but not as a penalty, for any of the following reasons, as pertains to this specification document:
 - 2.6.1 If the bidder fails to deliver the equipment or merchandise in full compliance with the accepted proposal and specifications.
 - 2.6.2 If the bidder fails or refuses to enter into a contract on forms provided by the County, and/or if the bidder fails to provide sufficient bonds or insurance within the time period as established in this specification document.

3. EQUAL OPPORTUNITY

- 3.1 Each bidder agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, ancestry, disability, age, or marital status.

4. DATA PRIVACY

- 4.1 Bidder agrees to abide by all applicable State and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, copyrights, patents and patent rights.
- 4.2 The bidder agrees to hold the County harmless from any claims resulting from the bidder's unlawful disclosure or use of private or confidential information.

5. BIDDER'S REPRESENTATION

- 5.1 Each bidder by signing and submitting a bid, represents that the bidder has read and understands the specification documents, and the bid has been made in accordance therewith.
- 5.2 Each bidder for services further represents that the bidder is familiar with the local conditions under which the work is to be done and has correlated the observations with the requirements of the bid documents.

6. INDEPENDENT PRICE DETERMINATION

- 6.1 By signing and submitting this bid, the bidder certifies that the prices in this bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder prior to bid opening directly or indirectly to any other bidder or to any competitor; no attempt has been made, or will be made, by the bidder to induce any person or firm to submit, or not to submit, a bid for the purpose of restricting competition.

7. CLARIFICATION OF SPECIFICATION DOCUMENTS

- 7.1 Bidders shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error which they may discover upon examination of the specification documents.
- 7.2 Bidders desiring clarification or interpretation of the specification documents shall make a written request which must reach the Purchasing Agent at least seven (7) calendar days prior to the date and time for receipt of bids.
- 7.3 Interpretations, corrections and changes made to the specification documents will be made by written addenda.
- 7.4 Oral interpretations or changes to the Specification Documents made in any other manner, will not be binding on the County; and bidders shall not rely upon such interpretations or changes.

8. ADDENDA

- 8.1 Addenda are written instruments issued by the County prior to the date for receipt of bids which modify or interpret the specification document by addition, deletion, clarification or correction.
- 8.2 Addenda will be mailed or delivered to all who are known by the County to have received a complete set of specification documents.
- 8.3 Copies of addenda will be made available for inspection at the office of the Purchasing Agent.
- 8.4 No addendum will be issued later than forty-eight (48) hours prior to the date and time for receipt of bids, except an addendum withdrawing the invitation to bid, or an addendum which includes postponement of the bid.
- 8.5 Bidders shall ascertain prior to submitting their bid that they have received all addenda issued, and they shall acknowledge receipt of addenda on the proposal form.

9. ANTI-LOBBYING PROVISION

- 9.1 During the period between the bid close date and the contract award, bidders, including their agents and representatives, shall not directly discuss or promote their bid with any member of the County Board or County Staff except in the course of County-sponsored inquiries, briefings, interviews, or presentations, unless requested by the County.

10. BRAND NAMES

- 10.1 Wherever in the specifications or proposal form brand names, manufacturer, trade name, or catalog numbers are specified, it is for the purpose of establishing a grade or quality of material only; and the term "or equal" is deemed to follow.
- 10.2 It is the bidder's responsibility to identify any alternate items offered in the bid, and prove to the satisfaction of the County that said item is equal to, or better than, the product specified.
- 10.3 Bids for alternate items shall be stated in the appropriate brand on the proposal form, or if the proposal form does not contain blanks for alternates, bidder MUST attach to the specification documents on Company letterhead a statement identifying the manufacturer and brand name of each proposed alternate, plus a complete description of the alternate items including illustrations, performance test data and any other information necessary for an evaluation. The bidder must indicate any variances by item number from the specification document no matter how slight. Bidder must fully explain the variances from the specification document, since brochure information may not be sufficient.
- 10.4 If variations are not stated in the proposal, it will be assumed that the item being bid fully complies with the County's specifications.

11. DEMONSTRATIONS/SAMPLES

- 11.1 Bidders shall demonstrate the exact item(s) proposed within seven (7) calendar days from receipt of such request from the County.
- 11.2 Such demonstration can be at the County delivery location or a surrounding community.
- 11.3 If bidder does not have an item in the area, it will be at the bidder's expense to send appropriate County personnel to the nearest location to view and inspect proposed item(s).
- 11.4 If items are small and malleable, and the bidder is proposing an alternate product, the bidder MUST supply a sample of the exact item. Samples will be returned at bidder's expense after receipt by the County of acceptable goods. Bidders must indicate how samples are to be returned.

12. DELIVERY

- 12.1 Each bidder shall state on his proposal form the date upon which he can make delivery of all equipment or merchandise. Time required for delivery is hereby made an essential element of the bid.
- 12.2 The County reserves the right to cancel orders, or any part thereof, without obligation, if delivery is not made within the time(s) specified on the proposal form.
- 12.3 All bids shall be based upon **inside** delivery of the equipment or merchandise F.O.B. the County at the location specified by the County, with all transportation charges paid.

13. WARRANTIES, GUARANTEES AND MAINTENANCE

- 13.1 Copies of the following documents must accompany the bid proposal for all items being bid:
 - 13.1.1 Manufacturer's warranties and/or guarantees.
 - 13.1.2 Bidder's maintenance policies and associated costs.
- 13.2 As a minimum requirement of the County, the bidder will guarantee in writing that any defective components discovered within a one (1) year period after the date of acceptance shall be replaced at no expense to the County. Replacement parts of defective components shall be shipped at no cost to the County. Shipping costs for defective parts required to be returned to the bidder shall be paid by the bidder.
- 13.3 Bidder Warrants and represents to the County that all software/firmware/ hardware/equipment /systems developed, distributed, installed or programmed by Bidder pursuant to this Specification and Agreement.
 - 13.3.1 That all date recognition and processing by the software/firmware/hardware/equipment/system will include the four-digit-year format and will correctly recognize and process the date of February 29, and any related data, during Leap years; and
 - 13.3.2 That all date sorting by the software /firmware/hardware/ equipment/system that includes a "year category" shall be done based on the four-digit-year format. Upon being notified in writing by the County of the failure of any software/ firmware/ hardware /equipment /systems to comply with this Specification and Agreement, Contractor will, within 60 days and at no cost to the County, replace or correct the non-complying software/ firmware/ hardware/ equipment/ systems with software/firmware/ hardware/equipment/systems that does comply with this Specification and Agreement.
 - 13.3.3 No Disclaimers: The warranties and representations set forth in this section 13.3 shall not be subject to any disclaimer or exclusion of warranties or to any limitations of Licensor's liability under this Specification and Agreement.

14. ACCEPTANCE OF MATERIAL

- 14.1 All components used in the manufacture or construction of materials, supplies and equipment, and all finished materials, shall be new, the latest make/model, of the best quality, and the highest grade workmanship.
- 14.2 Material delivered under this proposal shall remain the property of the bidder until:
 - 14.2.1 A physical inspection and actual usage of this material is made and found to be acceptable to the County; and
 - 14.2.2 Material is determined to be in full compliance with the specifications and accepted proposal.
- 14.3 In the event the delivered material is found to be defective or does not conform to the specification documents and accepted proposal, then the County reserves the right to cancel the order upon written notice to the bidder and return materials to the bidder at bidder's expense.
- 14.4 Successful bidder shall be required to furnish title to the material, free and clear of all liens and encumbrances, issued in the name of the Lancaster County, Nebraska, as required by the specification documents or purchase orders.
- 14.5 Selling dealer's advertising decals, stickers or other signs shall not be affixed to equipment. Vehicle mud flaps shall be installed blank side out with no advertisements. Manufacturer's standard production forgings, stampings, nameplates and logos are acceptable.

15. BID EVALUATION AND AWARD

- 15.1 The signed bid proposal shall be considered an offer on the part of the bidder. Such offer shall be deemed accepted upon issuance by the County of purchase orders, contract award notifications, or other contract documents appropriate to the work.
- 15.2 No bid shall be modified or withdrawn for a period of sixty (60) calendar days after the time and date established for receiving bids, and each bidder so agrees in submitting the bid.
- 15.3 In case of a discrepancy between the unit prices and their extensions, the unit prices shall govern.
- 15.4 The bid will be awarded to the lowest responsive, responsible bidder whose proposal will be most advantageous to the County, and as the County deems will best serve their requirements.
- 15.5 The County reserves the right to accept or reject any or all bids; to request rebids; to award bids item-by-item, by groups, or "lump sum"; to waive irregularities and technicalities in bids; such as shall best serve the requirements and interests of the County.

16. INDEMNIFICATION

- 16.1 The bidder shall indemnify and hold harmless the County, its members, its officers and employees from and against all claims, damages, losses, and expenses, including, but not limited to attorney's fees arising out of or resulting from the performance of the contract, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property other than goods, materials and equipment furnished under this contract) including the loss or use resulting therefrom; is caused in whole or part by any negligent act or omission of the bidder, any subcontractor, or anyone directly or indirectly employed by any one of them or anyone for whose acts made by any of them may be liable, regardless of whether or not it is caused by a party indemnified hereunder.
- 16.2 In any and all claims against the County or any of its members, officers or employees by an employee of the bidder, any subcontractor, anyone directly or indirectly employed by any of them or by anyone for whose acts made by any of them may be liable, the indemnification obligation under paragraph 16.1 shall not be limited in any way by any limitation of the amount or type of damages, compensation or benefits payable by or for the bidder or any subcontractor under worker's or workmen's compensation acts, disability benefit acts or other employee benefit acts.

17. TERMS OF PAYMENT

- 17.1 Unless other specification provisions state otherwise, payment in full will be made by the County within thirty (30) calendar days after all labor has been performed and all equipment or other merchandise has been delivered, and all such labor and equipment and other materials have met all contract specifications.

18. LAWS

- 18.1 The Laws of the State of Nebraska shall govern the rights, obligations, and remedies of the Parties under this proposal and any agreement reached as a result of this process.

19. EQUIPMENT TAX ASSESSMENT

- 19.1 Any bid for public improvement shall comply with Nebraska revised Statute 77-1323 and 77-1324. Indicating; every person, partnership, limited liability company, association or corporation furnishing labor or material in the repair, alteration, improvement, erection, or construction of any public improvement shall sign a certified statement which will accompany the contract, stating that all equipment to be used on the project, except that acquired since the assessment date, has been assessed for taxation for the current year, giving the county where assessed.

20. AFFIRMATIVE ACTION

- 20.1 The City of Lincoln-Lancaster County Purchasing Division provides equal opportunity for all bidders and encourages minority businesses and women's business enterprises to participate in our bidding process.

21. CONTRACTUAL AGREEMENT

- 21.1 County will furnish three (3) copies of the Contract to the successful Bidder who shall prepare attachments as required. Insurance as evidenced by a Certificate of Insurance, surety bonds properly executed, and Agreement signed with the date of signature shall be attached.
- 2.1.2 The prepared documents shall be delivered to the County within 10days (unless otherwise noted).
- 2.1.3 The County will sign the Contract Agreement, insert the date of signature at the beginning of the Contract Agreement, submit the Agreement to the County Board of Commissioners for approval and signature.
- 2.1.4 Upon approval and signature from the Board, the County will return one original to the Contractor.

Section 1 Site Development

1. Access Road

- 1.1. Contractor shall construct an access road from 70th street east to the tower site.
 - 1.1.1. There is an existing culvert bridging the ditch along the side of 70th Street.
 - 1.1.2. The width of the road shall be a minimum of fifteen (15) feet and run approximately 435 feet from 70th Street east to the tower site.
 - 1.1.3. Surface of road shall be covered with four (4) inches of crushed rock.
- 1.2. Drainage shall be designed to follow existing drainage ditch around the Lincoln Electric System Substation.
- 1.3. A gate limiting vehicular access to the site shall be installed across the access road twenty (20) feet east of 70th Street as per Figure 1.
 - 1.3.1. The gate shall be installed as per the prints using the gate specified in Midwest Steel Works, Inc. job number 98-182 or equivalent. (See Figure 5 – Site Access Gate)
 - 1.3.2. Gate posts shall be set in concrete five (5) foot deep and sixteen (16) inches in diameter.
 - 1.3.2.1. The post shall extend down to three (3) inches above the bottom of the hole.
- 1.4. Additional fencing shall be added from the gate south to the barbed wire fence surrounding the site to prevent vehicles from driving around the gate as per Figure 5.
 - 1.4.1. Line posts shall be set in concrete three (3) foot deep and nine (9) inches in diameter.
 - 1.4.1.1. The post should extend down to three (3) inches above the bottom of the hole.
 - 1.4.2. The rail shall be fabricated from 1-5/8 inch pipe forming a continuous rail and terminated into rail ends that are mounted to the posts.
- 1.5. Two (2) gate stops shall be installed to hold the gates in the fully open position on the east side of the gate.

2. Site

- 2.1. Contractor shall provide the grading necessary to insure proper drainage from the tower site to the existing drainage ditch.
 - 2.1.1. Contractor shall provide the grading necessary to direct drainage away from the equipment shelter and prevent ponding within the perimeter of the fence.
 - 2.1.2. A non-woven weed barrier shall be applied to all areas within the chain link fence.
 - 2.1.3. A three (3) inch layer of crushed rock no larger than three (3) inches shall be applied evenly on top of the weed barrier to all areas within the chain link fence.
 - 2.1.4. A three (3) inch layer of ¾-inch washed stone should be evenly placed on top of the crushed rock within the chain link fence

3. Grounds

- 3.1. Contractor shall install grounding system as per Figure 2 of the attached prints.
 - 3.1.1. All connection made below grade shall be made with exothermic weld.
 - 3.1.2. All ground rods shall be copper-clad steel, 5/8 inch in diameter, and a minimum of eight (8) feet long.
 - 3.1.3. The top of the ground rod shall be driven to a depth of at least thirty (30) inches below the final grade.
 - 3.1.4. All wire used in the grounding system shall be stranded #2 AWG bare copper wire unless otherwise noted.
 - 3.1.4.1. All wire used for connections between ground rods shall be buried a minimum of thirty (30) inches below final grade.
 - 3.1.4.2. All bends in the copper wire shall have a minimum radius of eight (8) inches.
 - 3.1.5. The grounds installed around the perimeter of the tower and building shall be installed a minimum of two (2) feet away from the concrete footings.
 - 3.1.6. Each leg of the tower shall be bonded to the nearest ground rod of the grounding system with stranded #2 AWG bare copper wire.
 - 3.1.6.1. Exothermic weld shall be used to make connections to the tower legs.
- 3.2. The RF entry port of the building shall be connected to the grounding system using the solid copper straps as per the manufactures specification.

- 3.3. The master ground buss mounted inside the equipment shelter shall be bonded to the exterior ground system using two (2) stranded #2 bare copper wire.
 - 3.3.1. The grounding conductors shall be routed through the PVC conduit supplied in the wall of the building below the Master Grounding Bar.
 - 3.3.1.1. The conduit shall be extended below the final grade to the grounding system in order to avoid making contact with the RF entry port ground straps.
 - 3.3.2. Connection to the Master Ground Bar shall be made using a 2-hole compression lug and antioxidant compound on each of the ground wires.
 - 3.4. The grounding system shall be bonded to Lincoln Electric System's Substation grounding system using a stranded #2 bare copper wire from two (2) separate points as per Figure 1.
 - 3.5. The perimeter fencing shall be connected to the ground grid as per Figure 2.
 - 3.6. Each of the corner and gate posts of the fence shall be bonded to the grounding system.
 - 3.7. The propane tank shall be bonded to the grounding system.
 - 3.8. Each post of the transmission line bridge shall be bonded to the grounding system.
- 4. Industrial Chain Link Fence**
- 4.1. An eight (8) foot tall chain link fence with two (2) 20-foot gates complying with ASTM F 567 shall be installed around the perimeter of the site.
 - 4.2. The steel chain-link fence fabric shall be composed of individual zinc coated, 9-gauge wire pickets which form a continuous 2-inch woven mesh.
 - 4.2.1. The fabric shall be installed on the outside of the framework and tied to the posts and rails using tie wires as per ASTM F 626.
 - 4.2.2. The chain-link fabric shall be installed 1-inch above the finished grade.
 - 4.2.3. A tension bar shall be threaded through the fabric and secured to the corner and gate posts with tension spans spaced not more than 15 inches on center.
 - 4.2.3.1. Nuts for tension bars and carriage bolts shall be installed on the inside of the fence.
 - 4.2.4. Maximum spacing between tie wires used to tie the fabric to the line posts is twelve (12) inches and to the braces is twenty-four (24) inches.
 - 4.2.4.1. Bend ends of wire to minimize hazards to individuals and clothing.
 - 4.3. Schedule 40 or equivalent, galvanized round steel posts shall be used for all corner, line, gate, support, and top rails complying with ASTM F1083.
 - 4.3.1. External and internal coating shall comply with ASTM F 1043, Material Design Group IA, Type A.
 - 4.3.2. All posts shall be sized as per Figure 5.
 - 4.4. All posts shall be set in concrete as per drawing.
 - 4.4.1. The posts shall be uniformly spaced not more than ten (10) feet apart.
 - 4.5. The top rail shall be installed eight (8) feet above the finished grade.
 - 4.5.1. The rail shall be fabricated from twenty-one (21) foot lengths or longer with swaged-end or expansion-type coupling forming a continuous rail run through line post caps and terminated into rail ends that are mounted on corner and gate posts.
 - 4.6. Install braces at gate and both sides of corner posts as per ASTM F 567.
 - 4.6.1. Locate braces at midheight of fence fabric so that it is plumb when diagonal rod is under proper tension.
 - 4.6.1.1. A truss rod and turnbuckle shall be installed and adjusted to proper tension.
 - 4.7. A tension wire shall be installed within six (6) inches above of the bottom of the fence fabric.
 - 4.7.1. The tension wire shall be zinc-coated steel wire complying with ASTM A 824 that matches the chain-link fabric.
 - 4.8. Two (2) double swing type gates shall be installed as per drawing.
 - 4.8.1. The gate posts shall be spaced twenty (20) feet apart.
 - 4.8.2. Frames and bracing shall be fabricated from galvanized steel tubing with outside dimensions and weight according to ASTM F 900.
 - 4.8.2.1. Frame corners shall be welded.
 - 4.8.3. A latch assembly and six (6) inch hand holes shall be installed as per drawings.
 - 4.8.4. Gate stops shall be installed to hold gates in the fully open position.
 - 4.9. Zinc coated steel barbed wire complying with ASTM A 121 shall be installed for security along the top of the fence and gates.

- 4.9.1. Three (3) strands of barbed wire shall be installed uniformly spaced and angled toward the security side of the fence.
- 4.9.2. The barbed wire shall be pulled taut and installed securely to extensions arms.

5. Utilities

- 5.1. Install conduit from the building to the power transformer located outside the fence as per Figure 2.

Section 2

Communications Tower

1. SCOPE

- 1.1. This section establishes the requirements for the fabrication and erection of a complete 360 foot, solid steel self-supporting communication tower for use in the City of Lincoln Nebraska's telecommunications system.

2. DELIVERY

- 2.1. A detailed list of equipment shipped must be received by and coordination of delivery of said equipment must be made with the City's project manager at least 24 hours before the arrival of the shipment.
- 2.2. Arrivals occurring on Saturdays, Sundays or nationally recognized holidays require a 48 hour notice during regular workday hours.
- 2.3. Responsibility for safe delivery of all equipment covered by these specifications, to the job site, shall rest with the contractor.
- 2.4. Any parts damaged or lost in transit must be promptly repaired or replaced by the contractor at no cost to the City of Lincoln.
 - 2.4.1. Repaired or replaced components must perform with greater than or equal capacity of the original parts to assure conformance with original design standards and this specification.
 - 2.4.2. No repairs shall be made without the written approval of the City's Project Manager.
- 2.5. Unloading of the structures and equipment and all costs associated before, during and after delivery and until the erection of the tower has been completed will be the responsibility of the contractor.
 - 2.5.1. All materials will be delivered to the job site and stored on cribbing so as not to come into contact with the ground.

3. SOIL CONDITIONS

- 3.1. Soil conditions shall not be assumed.
 - 3.1.1. A Geotechnical Engineering Report of the tower site is included in Attachment A.

4. COMPLETION

- 4.1. All excavation and concrete foundation work for tower base shall be completed by the time the tower steel components arrive to the site.
- 4.2. Tower erection shall commence not later than one business week from date of delivery, with exceptions possible due to prohibitive weather conditions.
 - 4.2.1. Deliveries made after that time shall be considered as a delay of the project and subject to the appropriate section of the General Conditions.

5. CODES STANDARDS AND SPECIFICATIONS

- 5.1. In the event of conflict between this specification and the codes, standards and specifications below, the most stringent requirement shall govern. The latest edition/version of each code, standard, and specification shall be used.
 - 5.1.1. American Institute of Manual Steel Construction (AIMSC).
 - 5.1.2. Electronic Industries Structural Standards Association Antenna Towers & Antenna Supporting Structures (EIA-222).
 - 5.1.3. American Welding Society Code for Arc and Gas Welding (AWS) DI.0-60-69 in Building Construction.
 - 5.1.4. FAA Advisory Circular Obstruction marking and lighting #AC 70/7460.
 - 5.1.5. National Electric Code Tower Lighting Kits (NEC).
 - 5.1.6. American Institute of Steel Specification for Structural Joints Construction Using ASTM A325 or A490 (AISC) Bolts.
 - 5.1.7. Federal Communications Federal Communications Commission Rules and Regulations - Part 17.
 - 5.1.8. American Concrete Institute Building Code Requirements for Reinforced ACI 318 Concrete.
 - 5.1.9. Concrete Reinforcing Steel Manual of Standard Practice Institute (CRSI).
 - 5.1.10. City of Lincoln Standard Specification for Municipal Construction, portland cement concrete mixtures.
 - 5.1.11. American Society for Testing and Materials (ASTM) for:

- 5.1.11.1. A36, A50, A242-63T, A440, A441 and A572 Structural Steel.
- 5.1.11.2. A123 Zinc (hot dipped) galvanized coatings on products fabricated from rolled, pressed and forged steel shapes, plates, bars and strips.
- 5.1.11.3. A153 Zinc coatings (hot dipped) on iron and steel hardware.
- 5.1.11.4. A307 Low carbon steel externally and internally threaded standard fasteners.
- 5.1.11.5. A325 High strength steel bolts.
- 5.1.11.6. A385 Zinc coatings (hot dipped) on assembled steel products.
- 5.1.11.7. A475 Steel strand wire (galvanized).
- 5.1.11.8. A615 Reinforcing bars.
- 5.1.11.9. A706 Reinforcing bars.
- 5.1.11.10. ASTM C-9 Ready-mixed concrete.
- 5.2. Where local ordinances specify higher standards than those represented in this specification, the local ordinances shall govern.

6. ANALYSIS AND DESIGN

- 6.1. The tower structures shall be designed to support and hold all the antennas listed in Section 3 on path within the twist, sway and displacement limits of EIA-222.
 - 6.1.1. Where multiple frequencies are specified, the most critical twist, sway and displacement limits shall govern.
- 6.2. The tower shall be designed for horizontal wind loads of 100 mph and 1-inch of solid radial ice as applicable in EIA-222 when fully loaded with the antenna systems listed in Section 3.
 - 6.2.1. Loading shall take into account both the resultant added wind load and dead load applied concurrently with wind on the tower.
 - 6.2.2. The wind loading may be degraded as specified in EIA-222 in an icing situation due to the lack of "high" wind.
- 6.3. Under wind loading conditions created by a wind speed of up to 35 mph at 233 feet above ground level, all horizontal members shall be capable of supporting a 250 lbs vertical load at mid-span, in addition to all other design loads.
- 6.4. Tower deflection limits are to be held both vertically and horizontally.
 - 6.4.1. Deflection must be determined at each specific point on the tower where an antenna is attached.
 - 6.4.2. The twist and sway of the tower at all antenna-mounting elevations shall be determined by analytical methods and shall be noted on the formal stress analysis.
- 6.5. The tower and foundation shall be designed by or under the direct supervision of a registered Professional Engineer, specifically experienced in the design of microwave towers.
 - 6.5.1. The allowable unit stresses and the actual member stresses resulting from the specified design loads shall be designed in accordance with the appropriate AISC and AISI specifications.
 - 6.5.2. All members of the structure shall be considered primary members for the purpose of establishing allowable compressive stresses per AISC, except those members whose sole function is to reduce the KL/R ratio of primary members.
 - 6.5.3. The safety factor for uplift shall be as described in EIA-222.
 - 6.5.4. Foundations shall be designed with sufficient reserve capacity to match the least tower leg reserve capacity.
 - 6.5.5. Combined tower wind loads and antenna loads shall be applied in combination such that the maximum axial forces are produced in girts, diagonals and legs. Multiple analyses may be necessary to ensure that worst case design conditions have been investigated.
 - 6.5.6. All design and analysis computations and installation drawings of the tower and foundation shall be certified and stamped by a licensed Professional Engineer.
 - 6.5.7. Two (2) full sets of the drawings and specifications must be supplied the City's Project Manager.

7. FABRICATION -

- 7.1. All fabrication, erection and identification of structural steel shall conform to AISC specifications.
- 7.2. Under no circumstances shall "dissimilar metals" be used in contact with one another.
- 7.3. Hot-dipped galvanizing of all sections shall be required per standards and methods listed elsewhere in this specification.

- 7.4. Quality welding processes and welding operators shall be used in accordance with AWS "Standards Qualification Procedure."
 - 7.5. Contractor shall properly mark and match-mark materials for proper field assembly.
 - 7.6. Fabrication shall be done for a delivery sequence, which will expedite erection and minimize field handling of materials.
 - 7.7. All members shall be connected with galvanized structural bolts unless otherwise approved.
 - 7.7.1. The contractor shall provide bolts, nuts and lock-washers in a quantity in excess of the actual bolt count for each size required.
 - 7.7.2. Bolt Count % Excess Minimum Excess
 - 7.7.3. 0-200 5% 1
 - 7.7.4. 200-500 4% 10
 - 7.7.5. 500-1000 3% 20
 - 7.7.6. 1000 & over 2% 30
 - 7.7.7. The tower shall be provided with the correct size and length of anchor bolts necessary to carry the anticipated tower loads.
 - 7.7.8. All threaded fasteners shall extend not less than 1-1/2 threads beyond nuts and locking devices.
 - 7.8. A climbing ladder shall be provided from the tower base to the top of the tower.
 - 7.8.1. Anti-fall devices shall be provided in accordance with ANSI 14.3.
 - 7.8.2. The maximum allowable spacing of the horizontal step rungs will be 16 inches.
 - 7.8.3. The minimum diameter of the step rungs will be 5/8 inch and shall support a concentrated load of 250 pounds.
 - 7.8.4. The minimum allowable spacing of the side rails shall be 16 inches.
 - 7.8.5. Step bolts are not acceptable.
 - 7.9. Rest platforms of appropriate size shall be provided at 100 foot intervals.
 - 7.10. All steel members and fasteners shall be galvanized (zinc coated) per standards in Section 5 of this specification.
 - 7.11. Under no circumstances shall any coating on any metal member or fastener be cathodic relative to the base material.
 - 7.12. If galvanized coating is disturbed by fieldwork or in Shipment, touch up shall be done with Wyandotte Chemical Galvanox Type #1 or equivalent.
- 8. TOWER MARKING AND LIGHTING**
- 8.1. An FAA approved dual lighting system consisting of medium intensity flashing white lights for daytime/twilight and red lights for night shall be supplied and installed by the successful bidder.
 - 8.1.1. The lighting system shall include a solid state alarm mechanism that automatically alarms for a failure of one or more side lights or strobes and power failure to lighting system.
 - 8.2. The tower light controller shall be mounted on the plywood located between the two HVAC units as per Figure 3.
 - 8.3. All wiring for tower lighting shall be in accordance with the following guidelines:
 - 8.3.1. All tower lighting equipment and wiring shall be furnished in accordance with FAA and shall meet all local, state and national electrical codes.
 - 8.3.2. The 2-inch conduit is located near the top of the plywood is for the control cable exiting the building.
 - 8.4. The tower shall have appropriate temporary lighting at night during construction as specified by FAA rules and regulations.
 - 8.5. It shall be the responsibility of the contractor to supply lighting equipment that does not create harmful interference to the radio equipment connected to the antenna systems in Section 3.
- 9. LIGHTNING PROTECTION/GROUNDING.**
- 9.1.1. Each leg of the tower shall be bonded to the nearest ground rod of the grounding system with stranded #2 AWG bare copper wire.
 - 9.1.1.1. Exothermic weld shall be used to make connections to the tower legs.
- 10. ANTENNA MOUNTS**
- 10.1. The successful bidder shall supply and install the antenna mounting brackets for the antenna systems specified in Section 3 paragraphs 1, 2, 3, 4 and 5.
 - 10.1.1. Mounts and stiff arm support locations shall meet or exceed the standards specified by the antenna manufacturer in their latest installation bulletin.

10.1.2. The antennas and feed lines shall be installed under a separate contract.

11. TRANSMISSION LINE SUPPORTS

- 11.1. Three (3) waveguide ladders designed to support the coax specified in Section 3 shall be mounted to the face of the tower.
 - 11.1.1. One ladder shall be mounted to the Southwest face of the tower and extend from the transmission line bridge to the top of the tower.
 - 11.1.1.1. This ladder shall provide at least one (1) transmission line support for each transmission line listed in Section 3 Paragraphs 1-9.
 - 11.1.2. A second ladder shall be mounted to the Northwest face of the tower and extend from the same height as the ladder in Paragraph 11.2 to the 80 foot level.
 - 11.1.2.1. This ladder shall provide at least one (1) transmission line support for each transmission line listed in Section 3 Paragraph 10.
 - 11.1.3. A third ladder shall be mounted to the East face of the tower and extend from the same height as the ladder in Paragraph 11.2 to the 100 foot level.
 - 11.1.3.1. This ladder shall be able to accommodate all of the transmission lines in Section 3 Paragraph 11.
 - 11.1.4. The ladder rung spacing shall be no greater than three (3) feet.
 - 11.1.4.1. Standard snap in hanger kits from Andrew will be used to attach the coax to the ladder.
- 11.2. A transmission line bridge shall be engineered to provide support and protection for the coax runs between the building and tower.
 - 11.2.1. The Bridge will extend from the building to the towers Southwest face as per Figure 2.
 - 11.2.2. The bridge shall provide at least one (1) support for each coax specified in Section 3, Paragraphs 1-9.
 - 11.2.2.1. The supports shall not be spaced greater than 3-feet apart.
 - 11.2.2.2. Standard snap-in hanger kits from Andrew will be used to attach the coax to the bridge.

12. FOUNDATION DESIGN

- 12.1. Contractor shall develop foundation designs based on soil conditions report in Attachment A.
 - 12.1.1. Foundation recommendations contained within soils reports are based on assumptions stated in the report.
 - 12.1.2. All recommendations made by HWS Consulting Group Inc. shall be adhered to.
 - 12.1.3. The ultimate responsibility for the foundation design rests with the contractor.
- 12.2. All concrete construction methods shall conform to the applicable sections of ACI 318, latest revision and the City of Lincoln specification for Municipal Construction.

13. FOUNDATION INSTALLATION

- 13.1. All materials shall be stored in such a manner as to prevent deterioration or intrusion of foreign matter.
 - 13.1.1. Deteriorated material shall not be used in the work.
- 13.2. Concrete shall be conveyed from the mixer to the place of final deposit by methods that will prevent the separation or loss of material.
- 13.3. When concreting is started, it shall be carried out as a continuous operation until the section being poured is completed.
- 13.4. Where the free fall of concrete is greater than five (5) feet, a placing trunk shall be used to direct the concrete and to avoid hitting the forms, form ties or reinforcing steel thus preventing segregation.
- 13.5. To ensure uniform production of concrete, the contractor, without extra compensation, shall supply THE CITY OF LINCOLN with the necessary representative sampling of concrete for each truckload of concrete, or fraction thereof, of each different class of concrete placed each day, and any additional concrete for test specimens when so requested.
 - 13.5.1. An independent testing lab at the City's expense shall do testing of the sample.

14. FORMS

- 14.1. Forms shall conform to the shapes, lines and dimensions shown on the construction drawings and shall be of adequate strength and tightness to support the fresh concrete without undue deformation and without loss of mortar.

- 14.2. Forms shall be properly braced and tied together to maintain their position and shape when concrete is tamped and vibrated.
- 14.3. Any misshapen concrete resulting from sagging or bulging forms may be rejected.
- 14.4. One-inch chamfer shall be provided on edges of exposed footings, equipment pads, beams and columns.
- 14.5. Forms for permanently exposed surfaces shall produce a smooth, even, level finish without fins.
- 14.6. No splashing of oil on forms will be allowed.
- 14.7. All piers shall project a minimum of 6 inches above the finished grade.
- 14.8. Removal of forms shall be done in a manner that will assure complete safety of the structure and concrete.

15. Reinforcing

- 15.1. All reinforcement bars shall be new and free of loose scale.
- 15.2. No splashing or oil coating of any kind will be permitted on any part of the reinforcing steel.
- 15.3. Reinforcing steel shall be manufactured from new billet steel, intermediate grade, deformed bars, in accordance with the Standard Specification of the ASTM A615, latest edition, or better.
- 15.4. Welded wire fabric reinforcement shall be in accordance with the Standard Specification of the ASTM A185, latest edition.
- 15.5. Metal reinforcement shall be accurately positioned and secured against displacement and shall be supported in a manner that will keep all metal away from the exposed surface.
 - 15.5.1. The minimum clear distance between any bar and the exposed surface shall be not less than three (3) inches when placed against earth or 1-1/2" when concrete is placed against formwork.

16. Concrete Pours

- 16.1. Concrete shall not be poured when temperatures of 32 degrees Fahrenheit or lower occur unless the Recommended Practice for Cold Weather Concreting (ACI 306-66) is followed.
 - 16.1.1. Accelerators such as calcium chloride shall not be used except by permission of The City of Lincoln's Independent Testing Lab and the contractor's design engineer and then shall be limited to a maximum of 2 percent by weight of cement.
 - 16.1.2. Concrete shall not be placed on frozen sub-grade or in frozen forms or handled in equipment containing ice or snow.
 - 16.1.3. The subgrade and forms shall be thawed out by the use of vented heating methods.
 - 16.1.3.1. Open flame heating methods will not be permitted.
- 16.2. No freestanding water will be allowed within the foundation excavation before and during the placement of concrete.
- 16.3. The slump for all concrete shall be three (3) inches +/- 1 inch when delivered.

17. TOWER ERECTION

- 17.1. The City of Lincoln has applied for the construction permit from the FAA.
- 17.2. The contractor shall furnish all necessary personnel, supervision, tools, equipment and transportation required to complete the installation and erection of all items specified herein.
- 17.3. Any materials that sustain damage shall be reported to the city's project manager.
 - 17.3.1. Correction of damage shall not be done by contractor without approval of the city's project manager.
- 17.4. Contractor shall set structural members accurately to lines and elevations indicated on the erection drawings and align and adjust the various members forming each tower bay before permanently fastening.
- 17.5. The contractor shall ensure tower plumbness is maintained during all phases of the erection work.
 - 17.5.1. Plumbness shall be measured by means of a transit placed so that the sight elevation angles are less than 45 degrees.
 - 17.5.2. At all times the tower shall be plumb within the tolerance specified in drawings.
- 17.6. After completion of tower construction, with all joints tight, and all appurtenances installed, the contractor shall be responsible for making a final check of tower plumbness in the manner prescribed above and provide substantiating documentation.
 - 17.6.1. The horizontal distance between the centerline at any two elevations shall not exceed .25 % of the vertical distance between the two elevations.

- 17.7. The twist (angular rotation in the horizontal plane) between any two elevations shall not exceed 0.5" in 10' (3m) and the total twist in the structure shall not exceed 5 inches.
- 17.8. Field modifications, including welding or burning of holes in members, are not acceptable.
- 17.9. Contractor shall provide a dedicated, full-time field supervisor.
 - 17.9.1. This contractor-employee will be assigned and available through all phases of construction.
 - 17.9.2. Responsibilities will include, but not be limited to:
 - 17.9.2.1. Verification of the tower location.
 - 17.9.2.2. Finished grade and construction of foundations.
 - 17.9.2.3. Delivery and erection of tower.
 - 17.9.2.4. Joint inspection of construction.
- 18. Prior to the beginning of any foundation work, a complete set of assembly drawings (prints) shall be provided to the City's Project Manager.**
 - 18.1.1. Contractor must provide the City of Lincoln a complete and orderly summary of the tower stress analysis showing loading considerations, tower and base reactions, member sizes, allowable stresses and maximum computed forces in members.
 - 18.1.2. The analysis is to be certified by a registered professional engineer with experience in tower design.
 - 18.2. A complete set of installation drawings shall be provided to the City's project manager.
 - 18.2.1. The drawings must show all of the necessary pieces, their part number corresponding to the number stamped on the piece itself and the connecting hardware sizes.
 - 18.2.2. The installation drawings shall show the location of all preset antennas and their side struts.
 - 18.2.2.1. The placement of antenna brackets is not to be left to the judgment of installation crews.
 - 18.3. Complete foundation drawings shall be provided to the City's project manager to show the anchor bolt placement, size and placement of all reinforcing bars, and pier sizes.
 - 18.3.1. It is also necessary to show the size, grade and bending detail of each piece of reinforcing steel.
- 19. AS-BUILT DRAWINGS**
 - 19.1. Contractor shall maintain a set of construction drawings and data sheets that record all field changes including changes in the work.
 - 19.2. These drawings and data sheets shall be kept current as the work progresses.
 - 19.3. Prior to acceptance, contractor shall deliver to the City's project manager the complete set of As-Built Drawings and data sheets with all changes clearly, neatly and legibly marked in permanent red ink.
 - 19.4. In addition three (3) copies of said drawings shall be provided for the City of Lincoln in AutoCAD .dwg or compatible format on CD ROM.
 - 19.4.1. Drawings converted to CAD format shall be verified as to accuracy by using a conversion program.
 - 19.5. Drawings to be provided shall include but not be limited to:
 - 19.5.1. Exterior architectural elevations.
 - 19.5.2. Electrical system one-line diagram.
 - 19.5.3. Installation, maintenance and repair manuals for lighting system.

Section 3 Tower Design Criteria

- 1. At the 339 foot level of leg 3, there will be an 800 MHz antenna system consisting of a mounting bracket, a DB812 antenna, a DB810 antenna, a tower top amplifier and coaxial cable.**
 - 1.1. One (1) antenna mounting bracket will be located with the top of the bracket located at the 339-foot level of leg 3. The bracket will be designed to hold a DB812 and DB810 antenna a minimum of three (3) feet away from the tower leg.
 - 1.1.1. One (1) DB812KE-XT Decibel Products antenna will be mounted to the bracket in the upward direction.
 - 1.1.1.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 350-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 1.1.1.2. One (1) LDF7-50A (1-5/8 inch) Andrew coaxial cable will run from the building to the 338-foot level for the DB810 antenna.
 - 1.1.1.2.1. One (1) LDF2-50A Andrew jumper will run from the 1-5/8 inch coax to the DB810 antenna.
 - 1.1.2. One (1) DB810KE-XT Decibel Products antenna will be mounted to the bracket in the downward direction.
 - 1.1.2.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 330-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 1.1.2.2. One (1) TX/RX model # 421-86A-10-18-xx Tower Top Amplifier will be mounted at the 338-foot level.
 - 1.1.2.2.1. Two (2) LDF5-50A (7/8 inch) Andrew coaxial cables will run from the building to the 333-foot level for the Tower Top Amplifier.
 - 1.1.2.2.1.1. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Antenna port to the DB812 antenna.
 - 1.1.2.2.1.2. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Transmission Line port one of the 7/8 inch coax.
 - 1.1.2.2.1.3. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Test port to the second 7/8 inch coax.
 - 2. At the 339 foot level of leg 2, there will be an 800 MHz antenna system consisting of a mounting bracket, a DB812 antenna, a DB810 antenna, a tower top amplifier and coaxial cable.**
 - 2.1. One (1) antenna mounting bracket will be located with the top of the bracket located at the 339-foot level of leg 2. The bracket will be designed to hold a DB812 and DB810 antenna a minimum of three (3) feet away from the tower leg.
 - 2.1.1. One (1) DB812KE-XT Decibel Products antenna will be mounted to the bracket in the upward direction.
 - 2.1.1.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 350-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 2.1.1.1.1. One (1) LDF7-50A (1-5/8 inch) Andrew coaxial cable will run from the building to the 338-foot level for the DB810 antenna.
 - 2.1.1.1.1.1. One (1) LDF2-50A Andrew jumper will run from the 1-5/8 inch coax to the DB810 antenna.
 - 2.1.2. One (1) DB810KE-XT Decibel Products antenna will be mounted to the bracket in the downward direction.
 - 2.1.2.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 330-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 2.1.2.2. One (1) TX/RX model # 421-86A-10-18-xx Tower Top Amplifier will be mounted at the 338-foot level.
 - 2.1.2.2.1. Two (2) LDF5-50A Andrew coaxial cables will run from the building to the 330-foot level for the Tower Top Amplifier.

- 2.1.2.2.1.1. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Antenna port to the DB812 antenna.
 - 2.1.2.2.1.2. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Transmission Line port to one of the 7/8 inch coax.
 - 2.1.2.2.1.3. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Test port to the second 7/8 inch coax.
- 3. At the 339 foot level of leg 1, there will be a 150 MHz antenna system consisting of a mounting bracket, one (1) DB224 antenna and coaxial cable.**
- 3.1. One (1) antenna mounting bracket will be located with the top of the bracket located at the 339-foot level of leg 1. The bracket will be designed to hold one (1) DB224 antenna a minimum of three (3) feet away from the tower leg.
 - 3.1.1. One (1) DB224 Decibel Products antenna will be mounted to the bracket in the upward direction.
 - 3.1.1.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly mounted near the 359-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 3.1.1.2. One (1) LDF5-50A Andrew coaxial cables run from the building to the 335-foot level for the Antenna.
 - 3.1.1.3. One (1) LDF2-50A Andrew jumper will run from the Antenna to the 7/8 inch coax.
- 4. At the 315 foot level of leg 1, there will be a 150 MHz antenna system consisting of a mounting bracket, (1) DB224 antenna and coaxial cable.**
- 4.1. One (1) antenna mounting bracket will be located with the top of the bracket located at the 315-foot level of leg 1. The bracket will be designed to hold one (1) DB224 antenna a minimum of three (3) feet away from the tower leg.
 - 4.1.1. One (1) DB224 Decibel Products antenna will be mounted to the bracket in the upward direction.
 - 4.1.1.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly mounted near the 335-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 4.1.1.2. One (1) LDF5-50A Andrew coaxial cables run from the building to the 315-foot level for the Antenna.
 - 4.1.1.3. One (1) LDF2-50A Andrew jumper will run from the Antenna to the 7/8 inch coax.
- 5. At the 284-foot level of leg 3, there will be a 450 MHz antenna system consisting of a mounting bracket, two (2) DB640 antennas, a tower top amplifier and coaxial cable.**
- 5.1. One (1) antenna mounting bracket will be located with the top of the bracket located at the 284-foot level of leg 3. The bracket will be designed to hold two (2) DB640 antennas a minimum of three (3) feet away from the tower leg.
 - 5.1.1. One (1) DB640 Decibel Products antenna will be mounted to the bracket in the upward direction.
 - 5.1.1.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 304-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 5.1.1.2. One (1) LDF7-50A Andrew coaxial cable will run from the building to the 285-foot level for the DB640 Antenna.
 - 5.1.1.2.1. One (1) LDF2-50A Andrew jumper will run from the 1-5/8 inch coax to the DB640 antennas.
 - 5.1.2. One (1) DB640 Decibel Products antenna will be mounted to the bracket in the downward direction.
 - 5.1.2.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 264-foot level and attached to the DB640 in order to minimize its deflection in the wind.
 - 5.2. One (1) TX/RX model # 421-86A-10-18-xx Tower Top Amplifier will be mounted at the 285-foot level.
 - 5.2.1. Two (2) LDF5-50A (7/8 inch) Andrew coaxial cables will run from the building to the 280-foot level for the Tower Top Amplifier.
 - 5.2.1.1. One (1) LDF2-50A Andrew jumper will run from the Tower Top Amplifier Antenna port to the DB640 antenna.

- 5.2.1.2. One (1) LDF2-50A Andrew jumper will run from one of the 7/8 inch coax to the Tower Top Amplifier Transmission Line port.
- 5.2.1.3. One (1) LDF2-50A Andrew jumper will run from the second 7/8 inch coax to the Tower Top Amplifier Test port
- 6. At the 224-foot level of leg 2, there will be a 150 MHz antenna system consisting of a mounting bracket, one (1) Sinclair Model SD224 antenna and coaxial cable.**
 - 6.1. One (1) antenna mounting bracket will be located with the top of the bracket located at the 224-foot level of leg 2. The bracket will be designed to hold one the antenna a minimum of three (3) feet away from the tower leg.
 - 6.1.1. One (1) SD224 antenna will be mounted to the bracket in the upward direction.
 - 6.1.1.1. One (1) DB5004S-MTD Fiberglass Outrigger Assembly will be mounted near the 244-foot level and attached to the antenna in order to minimize its deflection in the wind.
 - 6.2. One (1) LDF6-50A (1-1/4 inch) Andrew coax cable will run from the building to the 224-foot level.
 - 6.2.1. One (1) LDF2-50A Andrew jumper will run from the 1-1/4 inch coax to the SD224 antennas.
- 7. One (1) microwave dish mounted at the 200-foot level off of leg 1.**
 - 7.1. One (1) microwave dish mount with one (1) or more stiff arms.
 - 7.2. One (1) PL8-65D Andrew 8-foot antenna with Radome.
 - 7.3. One (1) EWP63 Andrew Microwave Transmission Line runs from the building to the 180-foot level.
- 8. One (1) microwave antenna mounted at the 180-foot level off of leg 2.**
 - 8.1. One (1) microwave dish mount with one (1) or more stiff arms.
 - 8.2. One (1) PL6-44E Andrew 6-foot antenna with Radome.
 - 8.3. One (1) EWP63 Andrew Microwave Transmission Line runs from the building to the 180-foot level.
- 9. One (1) microwave dish mounted at the 180-foot level off of leg 3.**
 - 9.1. One (1) microwave dish mount with one (1) or more stiff arms
 - 9.2. One (1) PL6-44E Andrew 6-foot antenna with Radome.
 - 9.3. One (1) EWP63 Andrew Microwave Transmission Line runs from the building to the 180-foot level.
- 10. Three (3) Valmont Model Number 99286 mounting brackets each designed to hold four (4) Cellular panel antennas will be mounted at the 80-foot level.**
 - 10.1. One (1) of the mounting bracket will be located on each leg of the tower.
 - 10.2. Four (4) cellular panel mount antennas will be mounted on each mounting bracket.
 - 10.2.1. A total of twelve (12) antennas will be located at the 80-foot level.
 - 10.3. One (1) LDF7-50A Andrew coaxial cable will run from a future building to each of the antennas.
 - 10.3.1. A total of twelve (12) cables will be run to the 80-foot level.
- 11. Three (3) Valmont Model Number 99286 mounting bracket designed for cellular panel antennas will be mounted at the 100-foot level.**
 - 11.1. One (1) of the mounting bracket will be located on each leg of the tower.
 - 11.2. Four (4) cellular panel mount antennas will be mounted on each mounting bracket.
 - 11.2.1. A total of twelve (12) antennas will be located at the 100-foot level.
 - 11.3. One (1) LDF7-50A Andrew coaxial cable will run from a future building to each of the antennas.
 - 11.3.1. A total of twelve (12) cables will be run to the 100-foot level.

Section 4

Communications Shelter

1. General

- 1.1. This statement of work and specifications is for shelter to be supplied to the City of Lincoln.
- 1.2. The shelter shall be a prefabricated concrete communication type of shelter.
- 1.3. The shelter structure shall be bullet resistant withstanding 30/06 rifle fire at a distance of 15 feet per UL 752 standards.
- 1.4. The shelter shall be vandal resistant and be constructed of steel reinforced concrete.
- 1.5. The shelter structure shall provide a 2-hour fire rating as defined by the Uniform Building Code.
- 1.6. The shelter shall be designed for the explicit use of housing electronic equipment within the controlled atmosphere required for transmitting and receiving two-way radio equipment.
- 1.7. Shelter shall incorporate non-porous wall and roof sections to preclude capillary action and shall be so designed and constructed to provide a minimum useful life period of 20 years, without need for major maintenance actions.
- 1.8. The shelter manufacturer's maintenance and warranty information shall be included.
- 1.9. The shelter shall meet the most recent version the following specifications and standards. In the event that two specifications conflict, the more stringent specification shall apply.
 - 1.9.1. Uniform Building Code
 - 1.9.2. BOCA National Building Code
 - 1.9.3. Standard Building Code
 - 1.9.4. National, State and Local Building Codes
 - 1.9.5. ANSI-A.58.1
 - 1.9.6. UL 752 requirements for low, medium and high power rifle
 - 1.9.7. National, State and Local Electric Code latest addition
 - 1.9.8. IEC – Illuminating Engineering Society

2. SHELTER SPECIFICATIONS

- 2.1. General
 - 2.1.1. The nominal outside dimensions of the shelter shall be 10 feet high, 32 feet wide, and 12 feet deep.
 - 2.1.2. The shelter shall contain two (2) rooms, one for electronic equipment and one for a generator.
 - 2.1.2.1. The inside measurements of the equipment room shall be a minimum of 23 feet wide by 10 feet deep
 - 2.1.2.2. The inside measurements of the generator room shall be a minimum of 7.5 feet wide by 10 feet deep.
 - 2.1.3. The shelter shall be sealed to resist dust infiltration and be watertight.
 - 2.1.4. The shelter shall be constructed with precast, preassembled steel reinforced solid concrete.
 - 2.1.5. Panel to panel connections shall be welded.
 - 2.1.6. Manufacturer must have a minimum of one ACI Certified Level 1 Concrete Technician supervising the placing of concrete in the forms.
- 2.2. Floor
 - 2.2.1. Floor section shall be precast steel reinforced solid concrete.
 - 2.2.1.1. The concentrated loading requirements are 3000 pounds over a 4-foot square area.
 - 2.2.2. The interior surface shall be covered with 1/8-inch light colored, industrial vinyl floor covering, bonded with a waterproof contact adhesive.
- 2.3. Walls
 - 2.3.1. Exterior wall section shall be four (4) inch, solid steel reinforced concrete with an exterior exposed aggregate finish.
 - 2.3.1.1. The exterior surfaces of the walls are to be sealed with two coats of Thoroglaize H Sealer and a topcoat of Thorosystem's Thorosheen Sealer or equivalent.
 - 2.3.2. Walls shall include insulation with a minimum value of R-11.
 - 2.3.3. The interior surface of the walls shall be finished with a smooth surface, light in color to permit maximum utilization of the available light, and shall be designed to support customer loads as specified.
 - 2.3.3.1. Plastic joint or corner trim shall be installed at all panel joints.
 - 2.3.4. A 4-inch vinyl baseboard shall be installed at the base of all interior walls.
- 2.4. Roof

- 2.4.1. The minimum specification for the roof shall be 4-inch steel reinforced solid concrete with a minimum of 1/8-inch per foot of drainage slope.
 - 2.4.1.1. The roof shall be a hip type sloping in two (2) directions.
- 2.4.2. The roof shall be a cap and fit over the walls, leaving no exposed roof to wall joint.
- 2.4.3. The roof shall provide at least a 2-inch overhang on all sides.
- 2.4.4. The roof insulation value shall be a minimum value of R-19
- 2.4.5. The ceiling shall be finished with a smooth surface and light in color to permit maximum utilization of available light.
 - 2.4.5.1. Plastic joint or corner trim shall be installed at all panel joints.
- 2.5. Doors
 - 2.5.1. The shelter shall be supplied with two (2) doors, one (1) for entry into each of the rooms.
 - 2.5.1.1. Both doors shall open to the outside of the shelter.
 - 2.5.2. Both door frames shall be 16 gauge galvanized steel, primed, painted, and fastened to the wall panel.
 - 2.5.3. Both doors shall be a minimum of 7 foot x 3 foot x 1-3/4 inch 18 gauge galvanized steel, insulated, primed, and painted.
 - 2.5.3.1. The door to the generator room shall be wide enough to install or remove generator set as a complete unit.
 - 2.5.3.2. The doors shall include weather-stripping, mortise lockset with deadbolt and stainless tamperproof steel ball bearing hinges.
 - 2.5.4. Both doors shall have an internal lock mechanism to allow rapid exit from the building (no key exit).
 - 2.5.5. Both doors shall be equipped with a device to hold the door in the open position.
 - 2.5.6. A drip cap shall be installed above each door.
 - 2.5.7. An alarm switch shall be included with each door.
 - 2.5.7.1. The switch shall consist of form 'C' contacts rated .1 amps at 28 Vdc.
 - 2.5.7.2. Each switch shall be wired to the alarm board in the equipment room.
- 2.6. Joints
 - 2.6.1. All joints shall be sealed with a compressible, resilient sealant.
 - 2.6.2. There shall be no exposed roof to wall or wall to floor exterior joint.
- 2.7. Concrete Specifications
 - 2.7.1. Compressive strength shall be 4000 PSI at 28 days.
 - 2.7.2. Mix shall be homogenous. Seeding of aggregate for exposed aggregate finish is not allowed.
 - 2.7.3. Cement used in concrete shall be standard Portland cement conforming to the requirement of the "Standard Specifications for Portland Cement", ASTM Designation C150.
 - 2.7.4. Concrete aggregates shall conform to one of the following specifications:
 - 2.7.4.1. Specifications for concrete Aggregates, ASTM Designation: C33.
 - 2.7.4.2. Specifications for Lightweight Aggregates for Structural Concrete, ASTM Designation C30.
 - 2.7.5. The water used in mixing concrete shall be free from injurious quantities of oil, alkali, vegetable matter and salt.
 - 2.7.5.1. Non-potable water shall not be used in mixing concrete.
- 2.8. Steel Reinforcement
 - 2.8.1. Reinforcement bars shall be deformed steel bars conforming to the requirements of the "Specifications for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement", ASTM Designation: A615.
 - 2.8.2. Welded smooth wire fabric shall be steel wire conforming to the requirements of the "Specifications for Welded Steel Wire Fabric for Concrete Reinforcement", ASTM Designation: A185.
- 3. ENVIRONMENTAL CONDITIONS**
 - 3.1. The shelter shall be designed to meet the following environmental conditions:
 - 3.1.1. Ambient temperature of 70° C (158° F) to -55° C (-67° F)
 - 3.1.2. Ambient humidity from (0 – 100) percent
 - 3.2. Equipment Room
 - 3.2.1. The equipment room shall be designed and equipped with two (2) environmental control systems, each consisting of air conditioning and heating systems capable of maintaining the inside temperature of the equipment room at 75° F under normal operating conditions.
 - 3.2.1.1. The internal temperature of the equipment room shall not rise above 84° F when the outside ambient temperature is 110° F and the equipment is operating at a 75% duty cycle.

- 3.2.1.2. The internal temperature of the equipment room shall not fall below 65° F when the outside ambient temperature is -30° F and all equipment is OFF.
- 3.2.1.3. Heating and cooling calculations shall be based on the manufacturer installed equipment and along with the customer installed equipment with heat loads of 45,000 BTU's.
- 3.2.2. The heating and air conditioning units shall be an exterior wall-mounted type equivalent to those manufactured by Bard, Marvair, or Carrier.
- 3.2.3. Each heating and air conditioning unit shall be equipped with low ambient and compressor anti cycle controls and integral resistance heat strip.
- 3.2.4. The heating and air conditioning system shall include a lead lag controller which allows for approximate equal operating time on each air conditioner unit.
- 3.2.5. Each heating and air conditioning unit shall include a time delay controller that prevents both units from turning on immediately after power has been restored by the generator after a loss of AC power from the local utility company.
- 3.2.6. All temperature control equipment shall be installed in strict compliance with manufactures instructions and guidelines.
- 3.3. Generator Room
 - 3.3.1. The Generator room shall be equipped with electric baseboard heaters designed to maintain the temperature at 40° F with an outside ambient temperature of -30°F.
 - 3.3.2. The baseboard heaters shall be controlled via a remote mount thermostat mounted on the wall.
- 4. Cable tray**
 - 4.1. The shelter shall include a 12-inch wide steel cable tray mounted inside the equipment room.
 - 4.2. The maximum rung spacing shall be 12-inches.
 - 4.3. The tray shall be installed a minimum of 7 foot-6 inches above the floor.
 - 4.4. The tray shall be laid out as per Figure 3.
 - 4.5. Each section of the tray shall be bonded to a connecting section with #2 AWG bare copper wire.
- 5. Generator Room**
 - 5.1. A typical layout of the generator room is shown in Figure 4.
 - 5.1.1. The specific layout for the room can be adjusted for the equipment supplied.
 - 5.2. The generator room shall be part of the concrete shelter with a solid fireproof wall between it and the equipment room.
 - 5.3. A separate entrance door to the outside of the building shall provide entry into the room.
 - 5.4. Wall entries shall be provided for generator engine air intake and exhaust, propane fuel supply line, electrical cables and alarms.
- 6. ELECTRICAL AND LIGHTING**
 - 6.1. Electrical System
 - 6.1.1. One (1) 120/240 Vac, Single Phase, Electrical service entrance meter socket with a disconnect switch mounted outside of the generator room and aligned with the generator transfer.
 - 6.1.1.1. The disconnect switch shall be designed to locked into position with a standard paddle lock.
 - 6.1.2. A rigid metal conduit shall be provided and sized accordingly for the service entrance conductors.
 - 6.1.2.1. The conduit shall run from the meter socket outside the generator room to the Transfer Switch.
 - 6.1.3. The shelter shall include a Joslyn Model 1265-85, PolyPhaser IS-PM240-BP or equivalent AC power line surge arrester installed according to manufactures instructions.
 - 6.1.4. The shelter shall include a 120/240 VAC, single phase, 60 Hz main power distribution panel capable of controlling a minimum of 200 amps.
 - 6.1.4.1. The panel shall contain a main breaker capable of disconnecting the power to the panel.
 - 6.1.4.2. The panel shall contain a minimum of 40 breaker spaces.
 - 6.1.4.3. The panel enclosures shall be NEMA 1 surface mounted.
 - 6.1.4.4. Circuit breakers for all manufacturer installed equipment and customer loads shall be provided.
 - 6.1.5. All interior shelter wiring shall be installed in surface mounted electrical metallic tubing (E.M.T.).
 - 6.1.6. All conductors shall be properly sized and rated for the load.
 - 6.1.6.1. Conductors shall be copper type THHN and, shall be no smaller than #12 AWG.
 - 6.1.7. Conductors shall be a continuous run from outlet to outlet.
 - 6.1.7.1. Splices shall be made within outlet boxes or junction boxes only.

- 6.1.8. A minimum of 6 inches of extra conductor wire shall be provided at each outlet to make splices or joints, except where it is intended to loop through sockets, receptacles and other fixtures without splices or joints.
- 6.1.9. Wall receptacles shall be 120V, 3 wire grounding type duplex receptacles rated 20 amp.
 - 6.1.9.1. Each wall receptacles shall be run to the main distribution panel as a separate circuit.
- 6.1.10. Typical spacing for duplex wall outlets is at 4-foot intervals and 18 inches above finished floor level.
- 6.1.11. One (1) dedicated twenty (20) amp circuit shall be run from the main power distribution panel to the tower light controller.
- 6.1.12. One (1) outside rated receptacle shall be located near the center of each of the exterior walls.
- 6.2. Uninterruptible AC Power Source (UPS)
 - 6.2.1. The shelter shall include a Powerware Model # FE18KVA UPS with external bypass switch and battery pack capable of supplying AC power for 10 minutes at full load after loss of utility power.
 - 6.2.2. The input and output of the UPS shall be wired to a Powerware model # BPE-05-MBB-1A make-before-break external bypass switch installed as per the manufacture's instructions.
 - 6.2.3. The AC Line Input of the UPS Bypass switch shall be wired to a 240 VAC, circuit breaker in the main distribution panel.
 - 6.2.3.1. The breaker shall be sized according to the UPS manufacture's specification.
 - 6.2.4. The AC Line Output of the UPS Bypass Switch shall be wired to a 120/240 VAC, 60 Hz UPS Power Distribution panel with main breaker and snap in branch power distribution breakers located as per Figure 3.
 - 6.2.4.1. The main breaker shall be sized according to the UPS manufacture specifications
 - 6.2.5. The UPS Power Distribution panel shall have a minimum of twenty (24) breaker spaces.
 - 6.2.6. Twenty (20) each 120 volt, 20 amp twist-lock receptacles shall be mounted to the cable tray facing down as per Figure 3.
 - 6.2.6.1. Each receptacle shall be wired to a separate 20-amp breaker in the UPS distribution panel.
- 6.3. Lights
 - 6.3.1. The equipment room shall include three (3) rows of florescent light fixtures with three (3) fixtures in each row.
 - 6.3.1.1. Each fixture shall contain two (2), 4-foot long, 40 watt florescent tubes.
 - 6.3.2. The generator room shall include three (3) florescent light fixtures located as per Figure 4.
 - 6.3.2.1. Each fixture shall contain two (2), 4-foot long, 40 watt florescent tubes .
 - 6.3.3. Four (4) high pressure sodium exterior light fixtures shall be provided on the outside of the building.
 - 6.3.3.1. Each fixture shall be rated for 40 watts minimum.
 - 6.3.3.2. Three (3) fixtures shall be installed in the centered of each side and back wall of the building.
 - 6.3.3.3. One (1) fixture shall be installed on the front of the building centered between the two doors.
 - 6.3.3.4. The fixtures shall be supplied with vandal resistant lens and photocell with a switch override located inside the equipment room.
- 6.4. Tower Light Controller
 - 6.4.1. A 4'x 8' x ¾" sheet of plywood shall be mounted to the wall between the air conditioner vents for mounting the tower light controller.
 - 6.4.2. A 2-1/2 inch conduit shall be run from the exit point near the coax entry panel to the edge of the plywood used to mount the tower light controller.
- 6.5. Generator
 - 6.5.1. One (1) 120/240 VAC single phase, 45 kW generator shall be installed in the generator room.
 - 6.5.2. The generator shall be designed to run on propane gas.
 - 6.5.2.1. The propane tank shall be located in the northwest corner of the site as per Figure 2.
 - 6.5.3. The generator shall include an adjustable delay timer for setting the time to transfer after startup.
 - 6.5.4. The generator shall include an adjustable delay timer for setting the time to transfer back to normal after the utility power is returned.
 - 6.5.5. The generator shall include an adjustable delay timer for setting cool down time for generator after utility power is returned.
 - 6.5.6. The generator shall include a runtime meter.
 - 6.5.7. The wiring for the generator alarms shall be run to a type 66 block on the alarm board in the equipment room.
- 6.6. Transfer Switch

- 6.6.1. The shelter shall include a 120/240 Vac, 260 ampere automatic transfer switch located in the generator room.
- 6.6.2. The switch shall include Meters that indicate voltage, current and power connected to the equipment side of the transfer switch.
- 6.6.3. The switch shall be designed to start the generator and transfer the load if power is interrupted to either leg of the main power feed.
- 6.6.4. The transfer switch shall be designed to automatically exercise the generator once a week.
 - 6.6.4.1. The switch shall be adjustable run the test in either loaded or unloaded.
 - 6.6.4.2. A manual test switch shall be included to simulate loss of utility power.
- 6.6.5. Wiring for the transfer switch alarms shall be run to a Type 66 punch block on the alarm board.
- 6.7. Alarms, telephone and fire protection
 - 6.7.1. A 4' x 8' x ¾" sheet of plywood shall be mounted to the wall for use as an alarm board as per Figure 3.
 - 6.7.2. Fire alarm
 - 6.7.2.1. The minimum fire protection required for the shelter is a smoke alarm and a Class ABC fire extinguisher for each room Alarm contacts shall be connected a 66 punch block on the alarm board.
 - 6.7.3. Additional form "C" type contact alarms shall be wired to a type 66 punch block on the alarm board for the following functions:
 - 6.7.3.1. Door entry alarms
 - 6.7.3.2. Low temperature alarms
 - 6.7.3.3. High temperature alarms
 - 6.7.3.4. Air conditioner failure alarms
 - 6.7.3.5. AC power fail alarm

7. Fiber

- 7.1. Four (4) 2-inch conduits shall extend from just above the Alarm board in the equipment room, through the generator room to a junction box mounted on the outside of the of the generator room wall.
 - 7.1.1. The junction box shall be a minimum of 18-inches deep in order to provide an adequate bending radius for the fiber.
 - 7.1.2. The junction box shall be mounted such that the conduit from the inside of the building is located near the top of the box.
- 7.2. Four (4) 2-inch conduits shall be run from the bottom of the junction box to just outside the perimeter of the fence.
 - 7.2.1. The conduit shall be installed in a manner such that it enters the box at a point closest to the lid.
 - 7.2.2. The minimum bending radius of conduit is 24-inches.

8. GROUNDING SYSTEM

- 8.1. Equipment Room
 - 8.1.1. The shelter shall include a 24-port RF cable entry panel with weather proof protective boots mounted to the back wall of the equipment room as per the drawings.
 - 8.1.1.1. Three (3) PolyPhaser model number 8PB-M or equivalent bulkhead entry panels shall be used.
 - 8.1.1.2. The entry panel shall provide for grounding of both the coaxial shield and coaxial cable protectors.
 - 8.1.1.3. The entry panel shall accommodate up to 3-inch diameter rigid coaxial cables.
 - 8.1.2. A Master Ground Buss Bar (Hargar model GBI14412JMGB or equivalent) shall be installed 66-inches above the floor centered below the coax entry panel.
 - 8.1.3. An internal split halo ground buss shall be installed six (6) inches below the ceiling of the equipment room using insulated standoffs mounted to the walls.
 - 8.1.3.1. The halo ground buss shall consisting of two (2) #2 AWG stranded green insulated copper wire each connected to the top side of the Master Ground Buss Bar using high compression 2-hole lugs connected to the sixth and seventh column of holes in the buss bar.
 - 8.1.3.2. The two (2) halo ground cables shall be mounted such that they extend in opposite directions around the equipment room and end at approximately the center point of the opposite wall.
 - 8.1.3.2.1. The unterminated ends shall be separated from each other by twelve (12) inches.
 - 8.1.4. The metal door frame shall be bonded to the internal halo ground.
 - 8.1.4.1. The metal doors shall be bonded to the door frames.

- 8.1.5. An equipment ground cable shall be bonded to the Master Ground Buss using #2 AWG stranded green insulated copper wire and run along the cable tray as per Figure 3.
 - 8.1.5.1. The cable shall be bonded to the Master Ground Bar using high compression 2-hole lugs connected to the third column of holes.
- 8.1.6. The cable tray shall be bonded to the Master Ground Buss Bar using #2 AWG stranded green insulated copper wire.
 - 8.1.6.1. The cable shall be bonded to the Master Ground Bar using high compression 2-hole lugs connected to the last column of holes on the right.
- 8.1.7. A ground riser running from the Master Ground Buss to the external grounding system shall be installed using insulated standoffs and two (2) #2 AWG bare copper wires.
 - 8.1.7.1.1. The cables shall exit the building through a PVC conduit that is installed at a 45 degree angle through the wall.
 - 8.1.7.1.2. The PVC shall be place at 42 inches above the floor.
 - 8.1.7.1.3. The PVC shall extend far enough so that it can be extended downward to the grounding system.
 - 8.1.7.2. The cables used for the ground riser shall be connected to columns four (4) and five (5) of the Master Ground Buss Bar using high compression 2-hole lugs.
 - 8.1.7.2.1. The lower ends of the ground riser cables shall be bonded to grounding system using exothermic weld.
- 8.1.8. Silicone sealer or equivalent shall be used to seal the PVC after the ground riser has been installed.
- 8.2. Generator Room
 - 8.2.1. Grounding of electrical power and surge suppression equipment shall be done in strict compliance to the latest edition of the National, State and Local Electric Codes.

9. QUALITY ASSURANCE

- 9.1. The shelter manufacturer shall have a quality assurance program to ensure that it's building meet the industry standards.
- 9.2. An inspection log shall be maintained with inspection disposition recorded by the Quality Assurance inspector.
 - 9.2.1. These records shall be available for inspection upon request.
- 9.3. The major inspection categories are framing, assembly, concrete, steel assembly, electrical, finish, grounding and preparation for shipping.
- 9.4. All wall and floor mounted equipment shall present a neat and symmetrical appearance and shall be installed to withstand shock and vibration due to shipping.
- 9.5. When completed, the shelter and installed accessories shall be complete in every respect and ready for intended use.

10. DOCUMENTATION

- 10.1. The following documentation shall be supplied by the shelter manufacture:
 - 10.1.1. Shelter start-up information and maintenance procedures.
 - 10.1.2. Detailed drawings showing the shelter layout and structural dimensions.
 - 10.1.3. Detailed drawings showing equipment and accessories installed in the shelter.
 - 10.1.4. Inventory list of equipment and parts associated with the shelter and installed equipment.
 - 10.1.5. Quality assurance acceptance documentation for the shelter.
 - 10.1.6. All required state and local certifications.
 - 10.1.7. Two (2) complete sets of Operation and Maintenance Manuals for the shelter and all manufacture installed equipment.
 - 10.1.7.1. Included in these manuals will be manufacturer data and warranty.

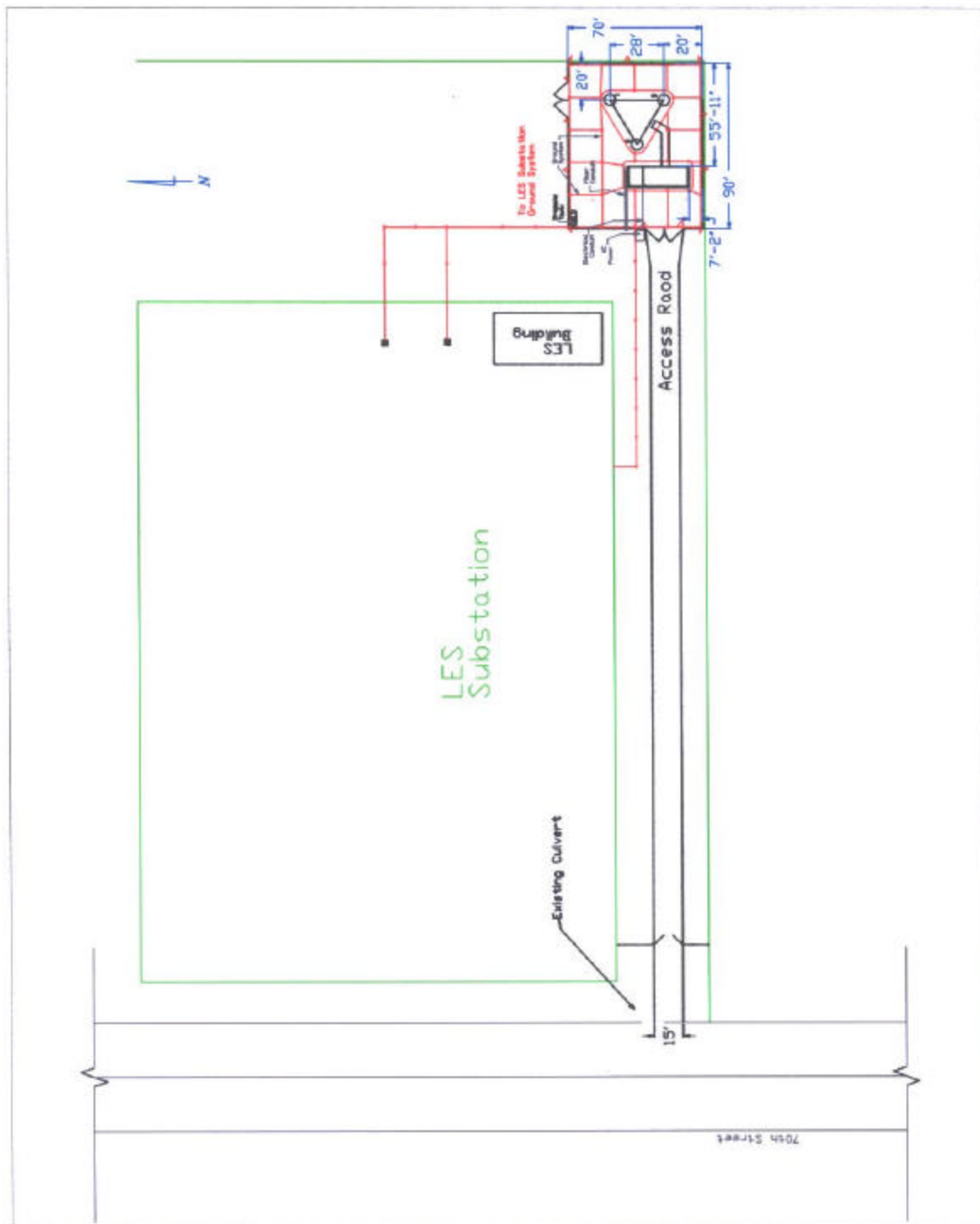


Figure 1

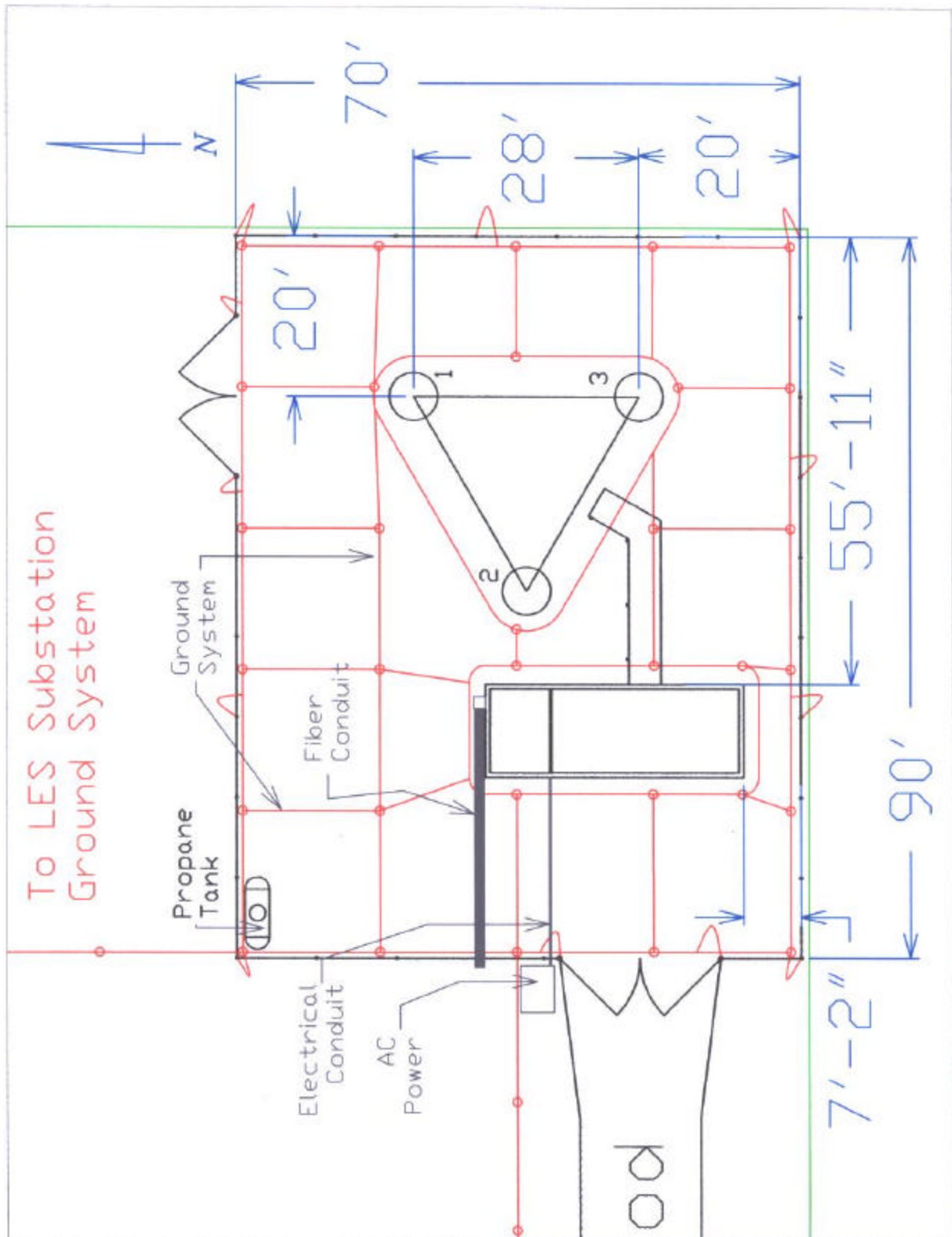


Figure 2

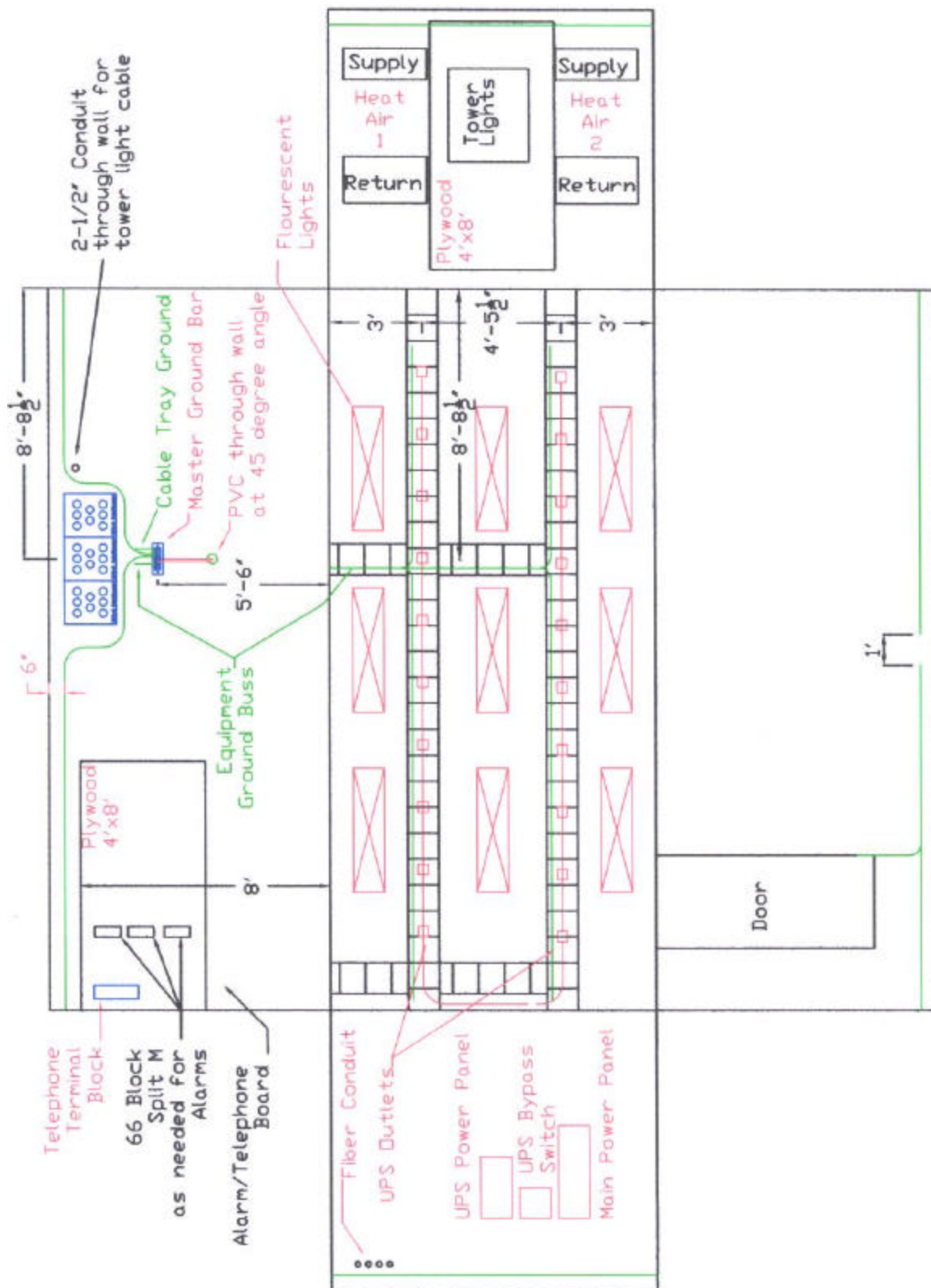


Figure 3

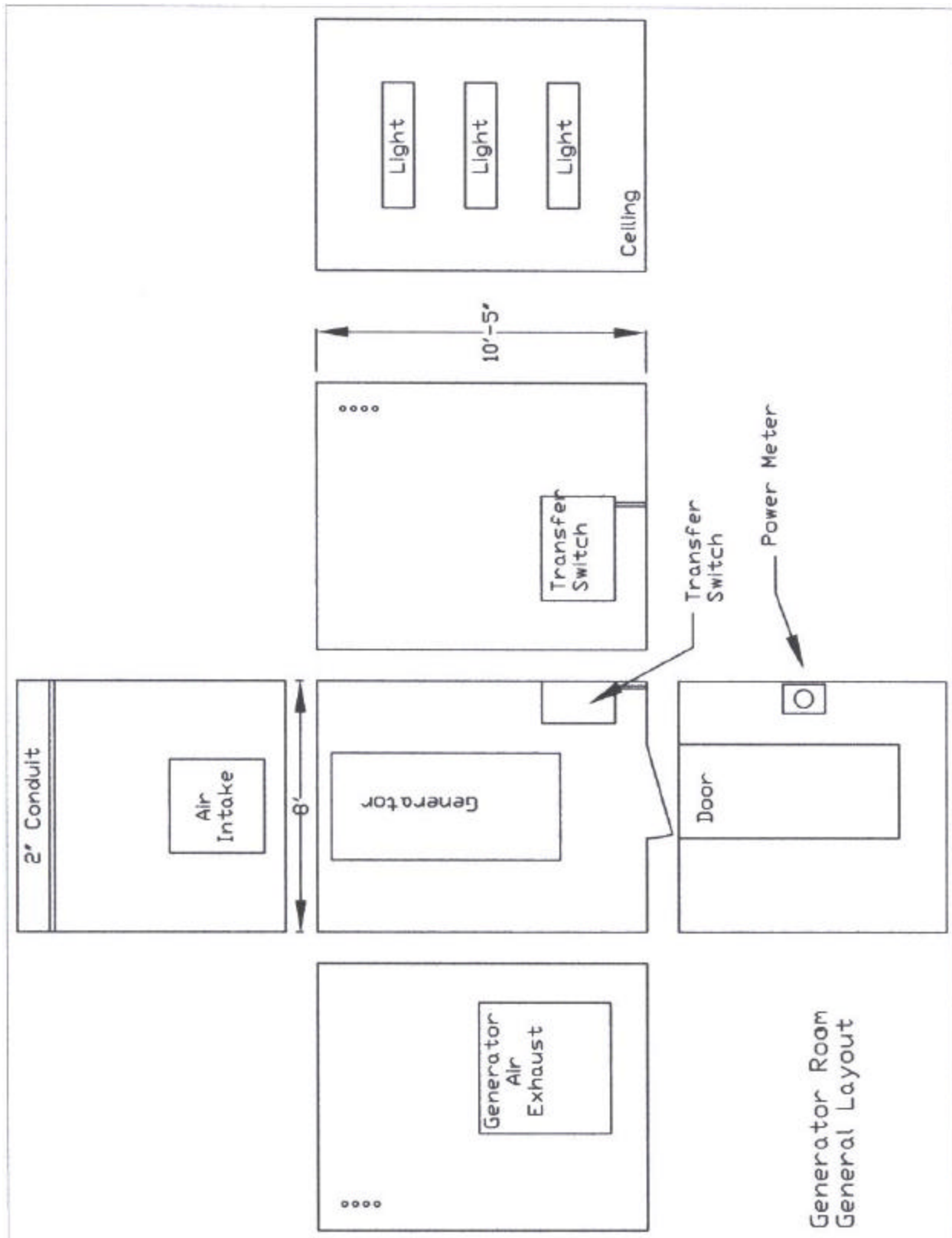


Figure 4

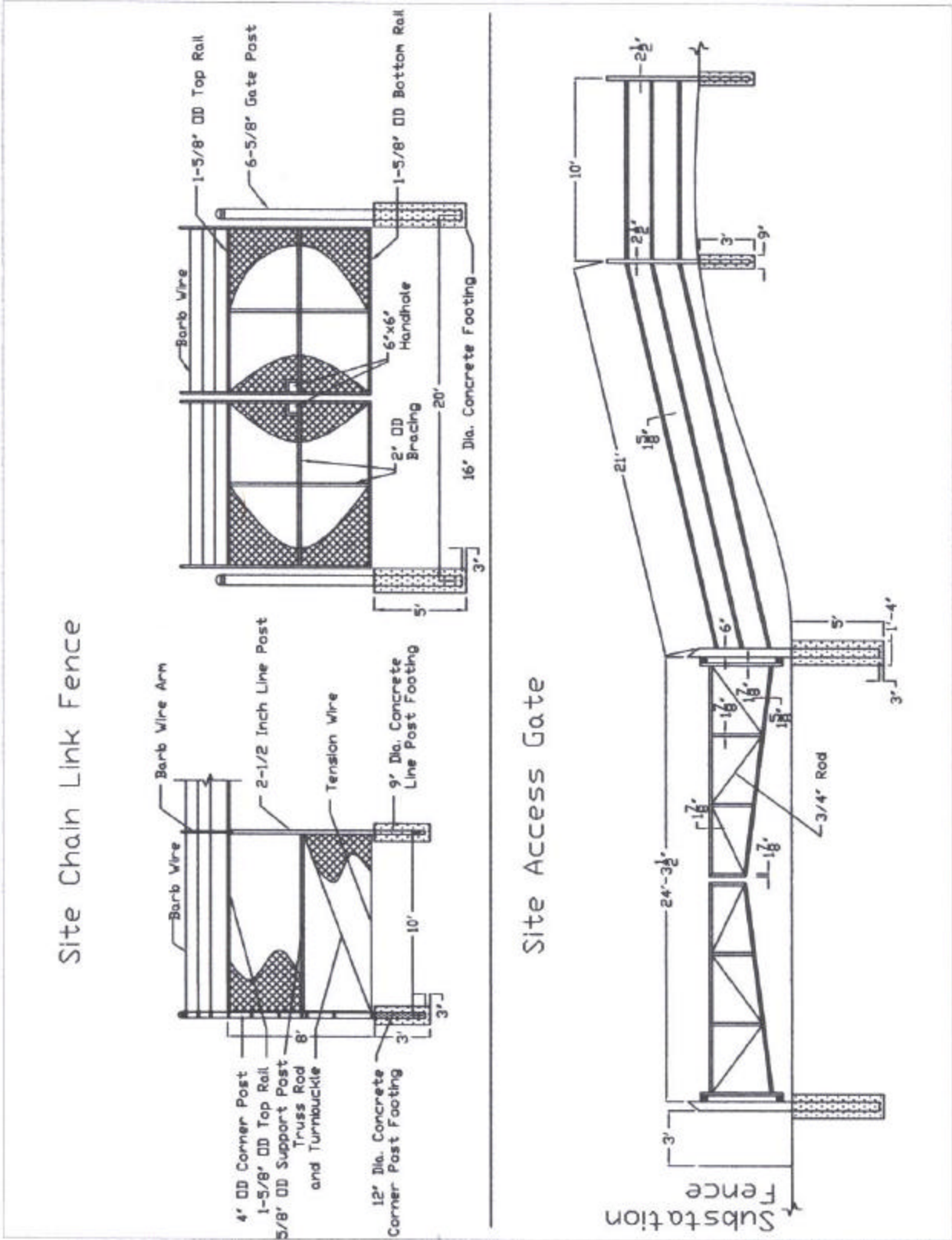


Figure 5

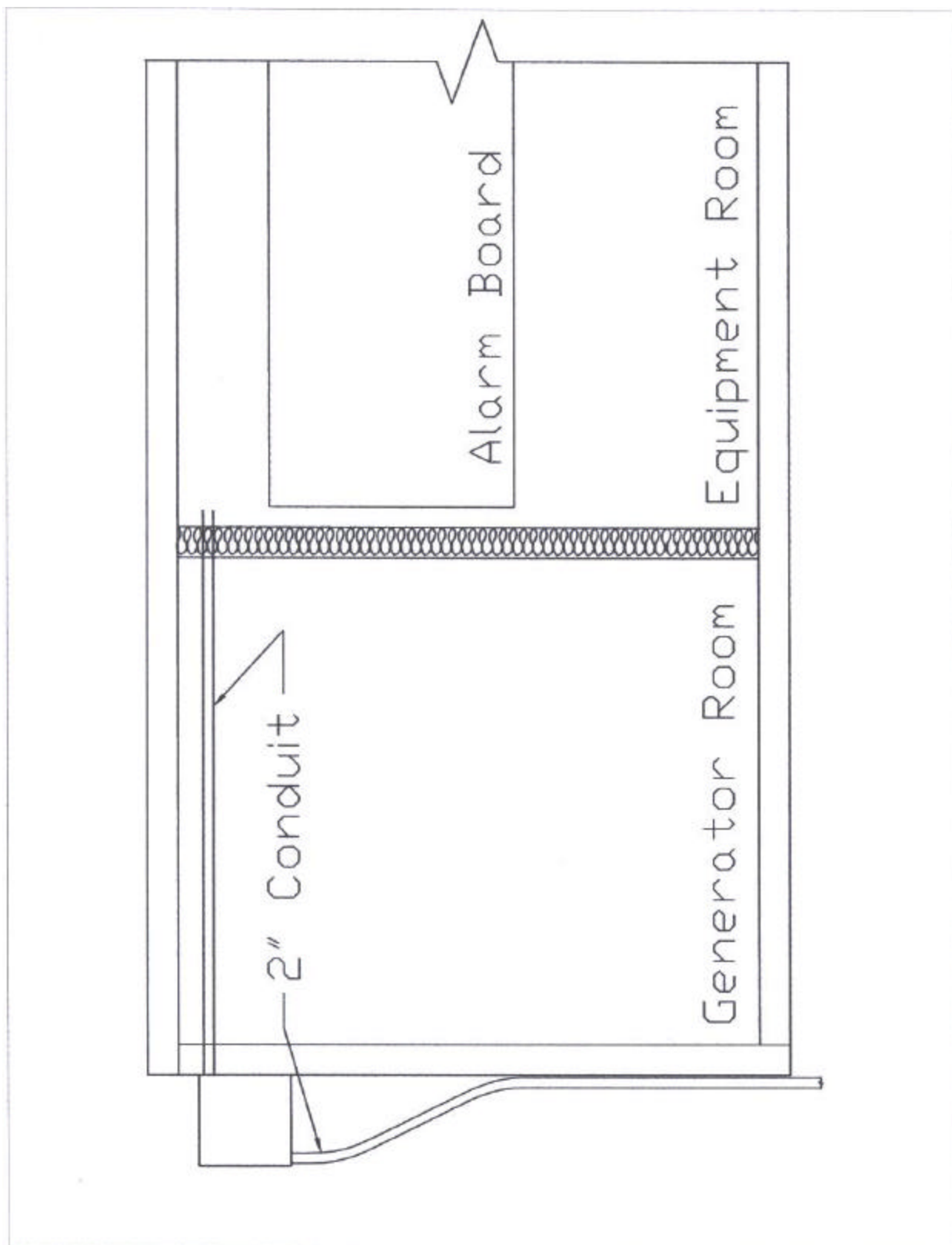


Figure 6

LANCASTER COUNTY GENERAL CONDITIONS

For the purpose and intent of this project, the enclosed “General Conditions, City of Lincoln, Nebraska 10/29/92)”, wherever “Owner” or “City of Lincoln (City)” is referenced it shall mean “Lancaster County”. In further clarification, it is understood that the City of Lincoln is not involved with this project, but rather Lancaster County is adapting the “General Conditions” to govern the administration of this project.

GENERAL
CONDITIONS

City of
Lincoln,
Nebraska

10/29/92

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GENERAL TERMS

I. DEFINITIONS

- A. Addendum (Addenda) shall mean the formal written instructions the City issued to prospective Bidders prior to the closing date for receipt of bids. Such instructions change or clarify the original plans or specifications, i.e., additions, deletions, modifications, or explanations.
- B. Advertisement shall mean the announcement the City made as required by law, stating the time and place for receiving bids for the Work.
- C. Architect shall mean the designated architect or engineer the City employed or contracted to provide design and other professional services related to the project. Architect shall include the Architect or the Architect's authorized representative.
- D. Bid shall mean the properly signed and guaranteed written offer of the Bidder to perform the Work. Bid shall include Proposals or other formal written offers to perform the Work.
- E. Bidder shall mean any individual, entity, firm, partnership, or corporation formally submitting a proposal to perform the Work or to supply materials for the Work. Bidder shall include any of the same acting through an authorized agent or representative.
- F. Change Order shall mean a written instrument the Architect or Contract Administrator issues and the Mayor and the Contractor approve to state the City and Contractor's agreement for a change in the Work. All Change Orders shall specify the method of payment, if any. All Change Orders shall specify adjustments in the Contract Sum or Contract Time, if any.
- G. City shall mean the City of Lincoln, Nebraska, and shall include the City's authorized representative.
- H. Claim shall include a demand or assertion by the City or Contractor seeking an adjustment to or interpretation of Contract terms, payment, time or other matters related to the Contract. The party making the Claim shall substantiate any such Claim.
- I. Construction Change Directive shall mean a written instrument the Architect or Contract Administrator issues and the City approves for a change in the Work within the scope of the Contract. Such changes shall include additions, deletions or other revisions. Such directive shall state a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. Construction Change Directives shall not invalidate the Contract in any event.
- J. Contract Documents shall include the Contract, Conditions of the Contract (General, Supplementary and other conditions), Drawings, Specifications, addenda issued prior to execution of the Contract, other documents listed in the Contract and modifications or other agreements required to complete the work issued after execution of the Contract. Unless specifically excluded in the Contract, Contract Documents shall also include the bidding requirements, Advertisement, Instructions to Bidders, sample forms, Contractor's Bid and Addenda. See also: Subparagraphs XIV(D); and XXIV(A).
- K. Contract shall mean the entire and integrated agreement between the City and Contractor. The parties may amend or modify the Contract only by Modification.
- L. Contract Time shall mean the time the Contract Documents allow for Substantial Completion of the Work. Contract Time shall include any changes the City authorized by Modification.
- M. Contractor shall mean the person or entity identified as such in the Contract. Contractor includes the Contractor or the Contractor's authorized representative. The contractor is always considered as an independent Contractor.
- N. Day shall mean calendar day including Sundays and Holidays. (See Subparagraph II(G), Time)
- O. Drawings shall include any graphic or pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, including: plans, elevations, sections, details, schedules and diagrams related to the Work.
- P. Liquidated Damages shall mean the amount prescribed in the Contract Documents that the Contractor is to pay to the City for each Day after the contract completion date until the Substantial Completion Date. Liquidated Damages are actual damages the Contractor owes the City. The Contractor agrees such damages are not a penalty.
- Q. May shall be permissive.
- R. Mayor shall mean the Mayor of the City of Lincoln, Nebraska.
- S. Modification shall include any (1) written amendment to the Contract that both the City and Contractor have signed, (2) Change Order, (3) Construction Change Directive or (4) authorized written order the Architect issued for a minor change in the Work.
- T. Month shall mean a calendar month.

- U. Product Data shall include illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information the Contractor furnishes to illustrate materials or equipment for the Work.
- V. Project Manual shall mean the document assembled for the Work that may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.
- W. Project shall mean the total construction related to the Work provided by this Contract. The Project may include construction by the City or by separate contractors.
- X. Samples shall include physical examples that represent materials, equipment or workmanship and establish standards for the Work.
- Y. Shall shall be mandatory.
- Z. Shop Drawings shall include drawings, diagrams, schedules and other data the Contractor or any Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor specially prepared to illustrate some portion of the Work.
- AA. Specifications shall mean any written requirement for materials, equipment, construction systems, standards or workmanship for the Work, including performance of related services.
- BB. Sub-subcontractor shall mean a person or entity a Subcontractor hires or contracts to perform a portion of the Work at the site. Sub-subcontractor includes any Sub-subcontractor or an authorized representative of the Sub-subcontractor.
- CC. Subcontractor shall mean a person or entity the Contractor hires or contracts to perform a portion of the Work at the site. Subcontractor includes any Subcontractor or an authorized representative of the Subcontractor. Subcontractor shall not include any separate contractor the City hires or contracts or any subcontractors of such separate contractor.
- DD. Substantial Completion Date shall mean the date the City certifies as such in accordance with Paragraph LIII, Substantial Completion.
- EE. Substantial Completion shall mean the stage when the City determines (according to the Contract Documents) that the Work or a designated portion thereof is sufficiently complete, and when the Contractor has secured all required occupancy permits, if any, so the City can occupy or use the Work for its intended use.

- FF. Work Commencement Date shall mean the date established as such in the Contract. The Contractor shall not postpone such date by failure to act or by permitting or allowing persons or entities under the Contractor's responsibility to postpone such date.
- GG. Work shall include the construction and services the Contract Documents require, whether completed or partially completed, and all other labor, materials, equipment and services necessary to fulfill the Contractor's obligations. Work may constitute the whole or a part of the Project.

II. CONSTRUCTION AND INTENT

- A. The General Conditions may refer to conditions that are not applicable to the Work. Such Conditions shall have no meaning.
- B. Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the work among Subcontractors or in establishing the extent of Work to be performed by any trade.
- C. Words and phrases that have well-known technical or construction industry meanings shall have such recognized meanings unless the context requires otherwise.
- D. Words used in the singular shall include the plural, and the plural the singular.
- E. Words used in the masculine gender shall include the feminine and the feminine the masculine.
- F. These rules of construction shall not apply to any part of the Contract that expressly excludes such construction, or where the subject matter or context of such provision requires otherwise.
- G. When the Contract Documents provide for a time determination by stating a certain number of days, the parties shall determine such time as follows:
 1. Exclude the first day and include the last day.
 2. Exclude Sunday if it would otherwise be the last day.
 3. Exclude the following Holidays as observed by the City if such Holiday would otherwise be the last day: Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day, New Year's Day, President's Day, Memorial Day or Independence Day.
- H. Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an." Such omission in one statement as opposed to inclusion in another shall not affect the interpretation of either statement.

- I. The parties shall interpret the General Conditions exclusively according to the terms of the Contract Documents. The parties do not intend any comparison to any other document.

III. OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

- A. The Drawings, Specifications and other documents the Architect prepares for this Project are and shall remain the property of the City and the Architect. Both the City and the Architect retain all common law, statutory and other reserved rights, including any copyright.
- B. Upon completion of the Work, the Contractor shall return or account for all copies of any Drawings, Specifications and other documents the Architect prepares (except the Contractor's record set) to the Architect.
- C. The City and the Architect have provided the Drawings, Specifications and other documents the Architect prepares for this Project (and copies thereof furnished to the Contractor) solely for use in this Project. Any other use requires the specific written consent of the City and Architect. The Contractor, Subcontractor, Sub-subcontractor, and material or equipment suppliers, shall not use such documents on other projects, including additions to this Project outside the scope of the Work.
- D. The City and Architect hereby grant to the Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents the Architect prepares for this Project. Subcontractors, Sub-subcontractors and material or equipment suppliers shall take such license limited strictly to documents appropriate for use in their own work. Such license shall include authority to submit or distribute licensed documents to meet official regulatory requirements or for other official purposes for the Project.

PRECONDITIONS AND ASSURANCES

IV. GENERAL PRECONDITIONS AND ASSURANCES

- A. By submitting a bid, the Contractor represents that the Contractor has:

1. Inspected and otherwise acquired site specific information of and concerning:
 - a. The conditions under which the work is to be performed;
 - b. the site of the work;
 - c. the structure of the ground;
 - d. any obstacles that may be encountered; and
 - e. all other relevant matters concerning the work;
 2. Compared and evaluated such personal observations with the requirements of the Contract Documents;
 3. Determined such methods and practices necessary as to underground structures, underground utilities (both public and private), underground soil and rock formations, ground water, and other obstacles that may be encountered;
 4. Made and prepared its Bid using only materials and equipment which comply fully with the plans and specifications, acknowledging that any failure to do so shall make the Contractor responsible for furnishing materials and equipment which fully conform without additional compensation;
 5. Examined the complete specifications and plans, including all related documents, all of which may contain provisions applicable not only to the Contractor, but also to the Subcontractors;
 6. Made such examinations and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the Contract;
 7. Verified the correctness of any quantities listed in any Contract Documents; and
 8. Received all the information the Contractor needs concerning the conditions of the Project Site.
- B. The Contractor shall not present a claim for adjustment to the Contract Sum or Contract Time for any condition the Contractor knew or reasonably should have known from information available to the contractor under Subparagraph IV(A). The Contractor shall not present a claim for surface or subsurface conditions encountered.
- C. The Contractor shall not present a claim for adjustment to the Contract Sum or Contract Time for any dispute related to: estimates of quantities in the Contract, or any misunderstanding of the nature or amount of work to be done.
- D. The Contractor shall employ such methods and means in the carrying out the work as will not cause any interruption or interference with any other contractor or subcontractor.
- E. Based upon the contract documents, the Contractor agrees and acknowledges that:
1. The Contract documents are adequate and sufficient to provide for completion of the Work. This acknowledgment extends to work that by inference or necessity may be required or useful for the completion of the work in accordance with all applicable laws, codes and professional

standards, even though such work may not be expressly provided for in the Contract Documents;

2. The contract sum is reasonable compensation for all the Work, including all unforeseen, foreseen and foreseeable risks, hazards and difficulties in connection with the Work;
3. The Contract Time is adequate for the performance of the Work; and
4. The Work shall not result in any lateral or vertical movement of any structure.

- F. The Contractor shall sign all necessary Contract Documents and any related documents necessary to complete the Work.

V. UNIT PRICES.

When the Contract Documents provide for portions or quantities of Work on a unit price basis, such estimated quantities in the Contract are approximate and are to be used only as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. The Contractor agrees that, during progress of the work, the City may find it advisable to increase or decrease the quantities as the City may deem necessary or desirable. The actual amount of work to be done and material to be furnished on a Unit Price basis may differ from the estimated quantities. The City shall make payment for Unit Price Work based on the actual number of units installed on the completed work.

VI. STATED CONDITIONS.

Where the City indicates conditions in the Contract Documents, such conditions shall be considered only for information and as indicative of conditions as observed at the time and place indicated. The City shall not be held responsible for any variance in conditions encountered at the time of actual work.

CITY

VII. INFORMATION AND SERVICES REQUIRED OF THE CITY

- A. The City shall not be responsible for furnishing surveys (unless required for the execution of the work and requested by the Contractor in writing) or for providing other information as to the physical characteristics, legal limitations, or utility locations for the project site. The City shall furnish or cause to be furnished to the Contractor a

legal description of the project site. Such legal description shall not be a part of the Contract Documents. The City may provide existing test borings for the site. If the Contractor uses any such information, the Contractor is solely responsible for such use. The City does not assume any responsibility whatsoever as to the sufficiency or accuracy of such borings, or any logs or results from such borings including any related interpretations. Further, the City provides absolutely no warranty or guarantee, express or implied, that the conditions indicated by such borings, investigations, logs, or information are representative of those existing throughout the project site, or any part thereof, or that changes or unforeseen developments may not occur.

- B. Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, (For example see: Paragraph XVIII.) the City shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.
- C. The City shall furnish information or services under the City's control with reasonable promptness to avoid delay in orderly progress of the Work.
- D. The above responsibilities supplement other duties and responsibilities of the City provided elsewhere, specifically including Construction by City or by Separate Contractors, Payments and Completion, and Insurance and Bonds.

VIII. CITY'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents (as required by correction of work provisions), or persistently fails to carry out Work in accordance with the Contract Documents, the City may order the Contractor to stop the Work, or any portion thereof, until the Contractor eliminates the cause for such order. The Mayor shall sign such stop order stating such cause in writing. The right of the City to stop the Work shall not give rise to a duty for the City to exercise this right for the Contractor or any other person or entity.

IX. CITY'S RIGHT TO CARRY OUT THE WORK

- A. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, the City may (without prejudice to other remedies) correct such deficiencies. The City may do so only when the Contractor fails to commence corrections within a seven-day period after receipt of written notice from the City, or when the Contractor fails to continue correction of such deficiencies with diligence and promptness.

- B. The City or the Architect shall issue an appropriate Change Order deducting the cost of correcting such deficiencies. Such Change Order shall include compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the City.

X. STORAGE OF MATERIALS

- A. The Contract shall store all materials under the general supervision and direction of the Architect.
- B. The Contractor shall store all Materials to preserve their quality and fitness for the Work and to facilitate prompt inspection.
- C. The Architect may, when needed, order the Contractor to store Materials under cover or on wooden platforms or as the Architect otherwise reasonably requires to protect the same from damage.
- D. The Contractor shall not use any materials in the Work that may contain Asbestos as defined under the Nebraska Asbestos Control Act, Neb. Rev. Stat §§71-6301 et. seq. without the express written approval of the City.

XI. ALTERATIONS AND SUBSTITUTIONS.

- A. The City or the Architect shall have the right to alter and modify the plans and specifications, thus making specific changes in the Work. If such changes diminish the amount of Work, the Contractor shall not file any claim for anticipated profit from such loss of Work. If such changes increase the amount of work, such increase shall be made by Modification to the Contract.
- B. Whenever the drawings or specifications identify a material, article, or piece of equipment by brand name or catalog number, such identification shall define performance, quality level, or other salient requirements. The Architect may consider other products of equal performance, capacity, quality and function upon the Contractor's written substitution request. Otherwise, the Contractor shall use the identified goods, unless the Architect approves such request for substitution in writing. Upon any substitution of lesser priced goods, the Architect shall prepare a Modification deducting any resulting price differential from the Contract Sum. Otherwise, the Contractor shall make any incidental changes or extra component parts required to accommodate the substitute without a change in the

Contract Sum or Contract Time. The Contractor warrants that approved substitutes will not effect major changes in the function or general design.

XII. DEFECTIVE MATERIALS.

- A. The City shall consider all materials not conforming to the specifications as defective. Unless remedied, the City shall reject all defective material, whether in place or not. The Contractor shall remove any such defective material from the work site at the Contractor's own cost.
- B. The Architect may approve materials the Contractor has remedied by reconditioning or correction to satisfactorily meet the Specifications. The Architect may make such approval in writing upon the written request of the Contractor. The Contractor shall not use any remedied materials without such written approval.

XIII. CITY SUPPLIED MATERIALS.

- A. The City shall furnish City supplied Material or equipment according to the Contract Documents in good condition and ready for installation. The Contractor shall pick up such material or equipment at a location the City or the Architect shall designate.
- B. The Contractor shall inspect and measure all City supplied material or equipment before the same is loaded onto the Contractor's vehicle for transportation to the work site. The Contractor shall complete and sign a Certificate of Acceptance for such materials and immediately submit the same to the Architect or his authorized representative. The Contractor shall note all defects in materials and measure on such Certificate.
- C. The Contractor shall return any excess city supplied materials to the point of receipt. The City shall thereupon issue the Contractor a written receipt verifying condition and measures such excess material. The City may refuse any materials damaged by the Contractor. The Contractor shall pay for the cost of any such damaged materials.

CONTRACTOR

XIV. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

- A. The Contractor hereby specifically acknowledges and declares that the Contract Documents are complete and sufficient to have enabled the Contractor to determine the cost of the work. The Contractor hereby specifically acknowledges and declares that

the Drawings, Specifications and all addenda are sufficient to enable the Contractor to construct the Work in accordance with applicable laws, statutes, building codes and regulations, and otherwise to fulfill all its obligations to complete the Work. In addition, if the Contractor performs any construction activity with knowledge that it involves a recognized error, inconsistency or omission in the Contract Documents, the Contractor shall assume full responsibility for such performance and shall bear the attributable costs for correction. See Subparagraph XVIII(C) for discrepancies related to Building Codes and regulations.

- B. The Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. The Contractor shall immediately report any errors, inconsistencies or omissions discovered to the Architect in writing.
- C. The Contractor shall perform the Work in accordance with the Contract Documents and submittals approved pursuant to Paragraph XXIV.
- D. The Architect or City may furnish the Contractor additional instructions and detailed drawings as necessary to carry out the Work. Such additional drawings are a part of the Contract Documents

XV. SUPERVISION AND CONSTRUCTION PROCEDURES

- A. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and shall have control over construction means, methods, techniques, sequences, coordination, and procedures for all portions of the Work.
- B. The Contractor shall be responsible to the City for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with Contractor.
- C. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals persons other than the Contractor perform.

- D. The Contractor shall be responsible for inspection of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.
- E. At the earliest possible time after the commencement of the Work on the Project Site, the Contractor shall:
 - 1. Contract (at Contractor's expense) a state licensed land surveyor to verify and establish all property corners and benchmarks;
 - 2. Locate the Project on the Project Site;
 - 3. Establish any necessary reference marks and axes from which the Work accurately can progress;
 - 4. Furnish the Architect evidence of the verification required above; and
 - 5. Provide written Notice to the City of any errors discovered from such verification.
- F. If the Work requires any public authority to inspect or approve the same, the Contractor shall cause the timely performance of any such inspection or approval. No such inspection performed or failed to be performed shall waive the Contractor's obligations under the Contract Documents. No such inspection or approval (even if the City is the inspecting or approving authority) shall act as an approval or acceptance of the Work or portions thereof by the City.
- G. The Contractor acknowledges that it is the Contractor's responsibility to hire all personnel for the proper and diligent prosecution of the Work. The Contractor shall use its best efforts to maintain labor peace for the duration of the Work. In the event of a labor dispute, the Contractor shall not be entitled to any increase in the Contract Sum.

XVI. LABOR AND MATERIALS

- A. Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for: labor, materials, equipment, tools, construction equipment and machinery; water, heat, utilities, transportation, and other facilities; and any other item or services necessary for proper execution and completion of the Work. Such items and services shall be so provided regardless of whether temporary or permanent or whether incorporated or to be incorporated in the Work.
- B. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not employ or permit employment of unfit persons or persons not skilled in tasks assigned to them.

XVII. WARRANTY

- A. The Contractor warrants to the City that:
 - 1. Materials and equipment furnished under the Contract shall be of good quality and new unless otherwise required or permitted by the Contract Documents;
 - 2. The Work shall be free from defects not inherent in the quality required or permitted;
 - 3. The Work shall be performed in accordance with accepted and established practices and procedures recognized in the construction trade in general and the Architect or design professionals in general; and
 - 4. The Work shall conform with the requirements of the Contract Documents.
- B. The City may consider Work not conforming to these warranty requirements as defective Work.
- C. The Contractor's warranty excludes: Remedy for damage caused by abuse by the City; Modifications not executed by the Contractor; improper or insufficient maintenance by the City; improper operation by the City; or normal wear and tear under normal usage.

XVIII. PERMITS, FEES AND NOTICES

- A. Unless specifically exempted in the Contract Documents, the Contractor shall secure and pay for the building permit and other legally required permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract. The Contractor shall procure all Certificates of inspection, use, occupancy, permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the Work. Certificates of inspection, use, or occupancy shall be delivered to the City upon completion of the Work. Such delivery shall be made in a timely manner to allow the City to occupy the Project in accordance with the approved Work schedule. The Contractor shall not request or claim any adjustment to the Contract Sum for the costs of procuring any such inspections or approvals.
- B. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work and shall likewise require all subcontractors and all their employees to do the same.

- C. The Contractor shall review the Contract Documents to determine any discrepancy between building codes and regulations the Contractor has knowledge of or should reasonably be able to determine. The Contractor shall immediately notify the City and the Architect in writing of any such discrepancies. The Contractor shall not violate any zoning, setback or other location requirements, laws or codes and ordinances, or of any recorded covenants the Contractor has knowledge. If the Contractor observes that portions of the Contract documents are at variance with applicable laws, statutes, ordinances, building codes, rules or regulations, the Contractor shall promptly notify the City and the Architect in writing, and any resulting changes necessary shall be accomplished by appropriate Modification. See Subparagraph XIV(A) for discrepancies related to error, inconsistency or omission in the Contract Documents.
- D. If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect and City, the Contractor shall assume full responsibility for such Work. In addition, the Contractor shall bear the attributable costs of correction.

XIX. PRE-CONSTRUCTION AND PROGRESS CONFERENCES.

- A. Within forty-eight (48) hours of receipt of notification from the Architect, the Contractor or his authorized representative shall, at no cost to the City, appear at a location designated by the Architect for the purpose of discussing pre-construction or construction scheduling, traffic control procedure or methods, and project progress during construction.
- B. At such conferences the Contractor or his authorized representative shall provide, at no cost to the City, any data sheets, construction schedules, or other information the Architect may reasonably request.

XX. ALLOWANCES

- A. The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Contractor shall supply items covered by allowances in such amounts and by such persons or entities as the City may direct. The Contractor may make reasonable objection to employing such persons or entities. Upon such reasonable objection the City shall appoint or direct alternate persons or entities as needed.
- B. Unless otherwise provided in the Contract Documents:
 - 1. The City shall select Materials and equipment under any allowance to avoid delay in the Work;

2. To determine Allowances, the Contractor shall include the Contractor's cost for materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
3. The Contract Sum (not the related allowances) shall include the Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses related to such allowances.
4. Whenever the costs in Clause XX(B)(2); above are more than or less than allowances, the City and Contractor shall adjust the Contract Sum accordingly by Change Order.

XI. SUPERINTENDENT

The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the Work. The superintendent shall represent the Contractor. Any Communication to the superintendent or that the superintendent receives shall bind the Contractor. The City or Architect shall confirm important communications to the Contractor in writing. The City or Architect shall similarly confirm any specific communication upon the written request of the Contractor.

XXII. CONTRACTOR'S CONSTRUCTION SCHEDULES

- A. The Contractor, promptly after being awarded the Contract, shall prepare and submit for the City's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents. The Contractor shall revise the same at appropriate intervals as required by the conditions of the work and Project. The Contractor shall relate such schedules to the entire Project for the expeditious and practicable execution of the Work.
- B. The Contractor shall prepare and keep current, for the Architect's approval, a schedule of submittals. The Contractor shall coordinate such schedule with the Contractor's construction schedule. The Contractor shall submit the same to the Architect allowing the Architect reasonable time to review the submittals.
- C. The Contractor shall conform to the most recent schedules.

XXIII. DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the City one record copy of the Drawings; Specifications; Addenda; Change Orders; Modifications; approved Shop Drawings; Product Data, Samples and similar required submittals in good order and marked currently to record changes and selections made during construction. During the Work, The Contractor shall permit the City and Architect access to such record copy. The Contractor shall deliver the same to the City upon completion of the Work.

XXIV. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Contract Documents shall not include Shop Drawings, Product Data, Samples and similar submittals. Such submittals demonstrate or illustrate the Contractor's proposal to conform to the information given and the design concept expressed in the Contract Documents for related portions of the Work.
- B. The Contractor shall review, approve, and submit to the Architect any Shop Drawings, Product Data, Samples, and similar submittals the Contract Documents require. The Contractor shall do so with reasonable promptness to prevent any delay in the Work or in the activities of the City or of separate contractors. The Architect may return (without any further action) any Submittals that the Contract Documents do not require.
- C. The Contractor shall obtain the Architects approval before beginning any portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals. The Contractor shall perform such Work only in accordance with approved submittals.
- D. By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, and has checked and coordinated the information contained within such submittals with the requirements of the work and the Contract Documents.
- E. The Architect's approval of such submittals shall not excuse the Contractor for deviations from any requirements of the Contract Documents. The obtain specific written approval for such deviations only when the Contractor has given written notice to the Architect with the original submittal and the Architect and the City have given written approval to the specific deviation. The Architect's approval of such submittals shall not relieve the Contractor from responsibility for any errors or omissions therein.

- F. The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than revisions the Architect requested on previous submittals.
- G. The Contractor may identify Informational submittals in the Contract Documents that the Architect is not expected to respond to or approve.
- H. When the Contract Documents require professional certification of performance criteria of materials, systems or equipment, the City and the Architect shall be entitled to reasonably rely upon the accuracy and completeness of such calculations and certifications.

XXV. USE OF SITE

- A. The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents. The Contractor shall not unreasonably encumber the site with materials or equipment.
- B. The Contractor shall protect the site and the Work from loss by theft or otherwise. Until completion and final acceptance of the work, the Contractor shall assume all risks for repair and replacement for damage to the site and the Work, whether caused by lightning, fire, wind, water, theft, vandalism or other causes.

XXVI. CONTRACTOR'S USE OF UTILITIES.

- A. The Contractor shall arrange for all temporary service connections for various utilities and shall pay the various utilities for such temporary services.
- B. Prior to the use of any City water from a fire hydrant, the Contractor shall take out the necessary permit for a hydrant meter and valve from the Lincoln Water System.
- C. The Contractor shall pay the permit fees that are established by the Lincoln Water System for the installation or moving of hydrant meters and valves.
- D. The Contractor shall not operate the hydrant, but may use the exterior valve to control the flow of water. The Contractor shall be liable for any damage to the meter and valve.

XXVII. CUTTING AND PATCHING

- A. The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make parts of the Work fit together properly.

- B. The Contractor shall not damage or endanger any portion of the Work or fully or partially completed construction of the City or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the City or a separate contractor except with written consent of the City and of such separate contractor. Such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the City or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

XXVIII. CLEANING UP

- A. The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project, all waste materials, rubbish, tools, construction equipment, machinery and surplus materials.
- B. If the Contractor fails to clean up as provided in the Contract Documents, the City may do so and charge the cost thereof to the Contractor.

XXIX. ACCESS TO WORK

The Contractor shall provide the City and Architect access to the Work in preparation and progress wherever located.

XXX. ROYALTIES AND PATENTS

- A. It is mutually understood and agreed that, without exception, the Contract Sum includes all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the Work.
- B. Whenever the Contractor uses or the Contract Documents require any design device, material, or process covered by letters, patent, or copyright, the Contractor shall provide for the right for such use by legal agreement with the patentee or owner thereof. Regardless of any agreement or lack thereof, the Contractor and the surety in all cases shall indemnify and hold harmless the City from any and all claims for infringement by the use of any such patented design, device, material, process, trademark or copyright, in connection with the Work. Likewise, the Contractor and the surety in all such cases shall indemnify the City for any costs, expenses, and damages that the City may be obligated to pay, for any such claims. The indemnification provided herein shall apply at any time during the Work and shall continue after the completion of the work indefinitely.

- C. The Contractor shall pay all royalties and license fees.
- D. The Contractor shall defend suits or Claims for infringement of patent rights.
- E. The Contractor shall promptly notify the Architect of any required design, process, or product the Contractor has reason to believe is an infringement of a patent, copyright or other intangible right. The Contractor shall assume full responsibility for and shall bear the attributable costs for any possible patent, copyright or other alleged infringement of intangible rights.

XXXI. INDEMNIFICATION

- A. To the fullest extent permitted by law, the Contractor shall indemnify and Hold Harmless the City, Architect, and agents and employees of any of them from and against Claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, that results in any Claim for damage whatsoever, including without limitation, any bodily injury, sickness, disease, death, or any injury to or destruction of tangible or intangible property, including any loss of use resulting therefrom that is caused in whole or in part by Contractor or anyone directly or indirectly employed by Contractor, or anyone for whose acts any of them may be liable, regardless of whether or not such Claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Paragraph XXXI. This section shall not require Contractor to indemnify or Hold Harmless the City for any losses, Claims, damages, and expenses arising out of or resulting from the sole negligence of the City.
- B. In addition, the City shall not be responsible nor be held liable, for any damage consequent upon the use, misuse or failure of any equipment used by Contractor or anyone directly or indirectly employed by Contractor. The Contractor's acceptance or use of any such equipment shall mean that Contractor accepts full responsibility for any loss or damage to the equipment while the equipment was used or under the control of Contractor, or anyone directly or indirectly employed by Contractor. In addition to paying for any such damage to the equipment itself, the Contractor agrees to exonerate, indemnify, and hold harmless the City from and against any and all Claims for any damage whatsoever resulting from the use, misuse or failure of such equipment. Such indemnification applies

regardless of whether such damage or loss is occasioned by any employee or property of Contractor, the City or other persons. Such indemnification shall not be qualified or reduced in any way because the subject equipment may be furnished, rented or loaned to Contractor by the City.

- C. In Claims by any person or entity indemnified under this Paragraph XXXI or by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Paragraph XXXI shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' or worker's compensation acts, disability benefit acts or other employee benefit acts.

XXXII. PROTECTION OF WORK AND PROPERTY

- A. The Contractor shall protect and support all water, sewer, gas and other pipes and structures; telephones, telegraph or electric power lines; all railroad tracks, pavement, building walls, fences, utilities, or other properties, public or private, which may be damaged during the execution of this Work. During all operations under the Contract, the Contractor shall carefully protect all trees, shrubbery, sod, plantings, etc., not designated to be removed as part of the work of the Contract.
- B. In the event of damage or injury to such property or improvements, the Contractor shall promptly repair the same to the satisfaction of the City. The Contractor shall pay the attributable costs for any such repairs. See Also: Contractor's obligations and assumption of risk in Subparagraph XXV.
- C. The City may provide information for existing sub-surface structures in the vicinity of the work in the Contract Documents. The City does not, however, guarantee the completeness or accuracy of this information. Any delay or extra cost to the Contractor due to encountering structures differing from those provided shall not constitute a Claim for extra payment.

XXXIII. TRAFFIC CONTROL

- A. Where required for any activities related to the Work, all Traffic Control Devices and Signs shall conform to the City's traffic control regulations and requirements.
- B. All costs associated with traffic control shall be paid for by the Contractor as a part of the Contract Sum.

XXXIV. FAIR EMPLOYMENT PRACTICES

The Contractor and the Subcontractors shall not discriminate against any employee (or applicant for employment) with

respect to compensation, terms, advancement potential, conditions, or privileges of employment, because of such person's race, color, religion, sex, disability, national origin, ancestry, age, or marital status pursuant to the requirements of Lincoln Municipal code Chapter 11.08 and Section 48-1122, Nebraska Reissue Revised Statutes of 1943.

XXXV. FAIR LABOR STANDARDS

The Contractor and the Subcontractors shall maintain Fair Labor Standards in the performance of the Contract, as required by Chapter 73, Nebraska Reissue Revised Statutes of 1943.

ARCHITECT

XXXVI. ARCHITECT'S ADMINISTRATION OF THE CONTRACT

- A. The Architect shall provide administration of the Contract as described in the Contract Documents, and may act as the City's representative, with the City's concurrence, (1) during construction, (2) until final payment is due and (3) from time to time during the correction period described in Paragraph LXIV. The Architect shall have authority to act on behalf of the City only to the extent provided in the Contract Documents and allowed by law.
- B. The City and the Architect shall at all times have the right of access to the site. The City requires the Architect to visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine if the Work is being performed in a manner that, when completed, will be in accordance with the Contract Documents. On the basis of on-site observations, the City requires the Architect to keep the City informed of progress of the Work, and guard the City against defects and deficiencies in the Work. The Contractor shall cooperate and accommodate the Architect pursuant to the site visitation and reporting requirements above. The Architect's responsibilities shall not lessen or excuse any obligations or duties of the Contractor.
- C. The City and Contractor shall attempt to communicate to each other through the Architect. The City and Contractor shall communicate with the Architect's consultants through the Architect. The City shall communicate with

Subcontractors and material suppliers through the Contractor. The Contractor shall communicate with separate contractors through the City.

- D. The Contractor shall permit the Architect to review and certify any amounts Claimed due upon observation and evaluation of the Contractor's Applications for Payment. The Architect shall issue certificates for Payment to the City based on such review.
- E. The Architect may reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable for implementation of the intent of the Contract Documents, the Architect may require additional inspection or testing of the Work in accordance with Subparagraphs LXII(A-B), whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work other than the City.
- F. The Architect shall review and approve or take other appropriate action upon the contractor's submittals such as Shop Drawings, Product Data and Samples. The Architect shall review the same for conformance with information given and the design concept expressed in the Contract Documents. The Architect's review shall not excuse the Contractor from determining the accuracy and completeness of details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Paragraphs XIV, XVII, and XXIV. The Architect's review shall not constitute approval of safety precautions or any construction means, methods, techniques, sequences or procedures (unless otherwise specifically stated by the Architect.) The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.
- G. The Contractor shall permit the Architect to conduct inspections to determine the date or dates of Substantial Completion and the date of final completion.
- H. If the City and Architect agree, the Architect may provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

CLAIMS & DISPUTES

XXXVII. CLAIMS AND DISPUTES

- A. The Contractor and City shall make any Claim against the other party in writing giving a description thereof to the Architect and the other party. The claimant may make a Claim only within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the Claimant first recognizes the condition giving rise to the Claim, whichever is later.
- B. Pending final resolution of a Claim (unless the Parties otherwise agree in writing) the Contractor shall proceed diligently with performance of the Contract and the City shall continue to make payments in accordance with the Contract Documents.
- C. When the City makes final payment and the Contractor accepts the same, the City and the Contractor thereby waive all claims except those arising from:
 - 1. Unsettled liens, Claims, security interests or encumbrances arising out of the Contract;
 - 2. Failure of the Work to comply with the requirements of the Contract Documents; or
 - 3. Terms of special warranties required by the Contract Documents.
- D. If the either party encounters or discovers (1) subsurface or otherwise concealed physical conditions which differ materially from the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherently encountered in the Work, then the observing party shall give prompt notice of the condition to the Architect and the other party by giving a description thereof. The observing party shall give such notice promptly before conditions are disturbed and in no event later than 21 days after first observance of the same.
- E. If the Contractor wishes to make Claim for an increase in the Contract Sum, the Contractor shall provide written notice as provided herein before proceeding to execute the Work. notice is not required for Claims relating to an emergency endangering life or property arising under Paragraph LVIII, Emergencies. The Contractor may make claims for additional cost for reasons including but not limited to (1) a written opinion from the Architect, (2) an order by the City to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment

by the City, (5) termination of the Contract by the City, (6) City's suspension or (7) other reasonable grounds.

- F. If the Contractor wishes to make Claim for an increase in the Contract Time, the Contractor shall give written notice as provided herein. The Contractor's Claim shall include an estimate of cost and delay on the Work, if any. In the case of a continuing delay only one Claim is necessary.
- G. If the Contractor bases a Claim for additional time on adverse weather, the Contractor shall substantiate such Claim with data substantiating that: (1) the adverse weather was abnormal for the period of time, (2) the Contractor could not have reasonably anticipated the adverse weather, and (3) the weather had an adverse effect on the scheduled construction.
- H. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, the claimant shall give written notice of such injury or damage (whether or not insured) to the other party within 21 days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. If the claimant asserts additional cost or time related to such injury or damage, the claimant shall file a separate claim for each.

XXXVIII. RESOLUTION OF CLAIMS AND DISPUTES

- A. The Architect shall review Claims and take one or more of the following preliminary actions within ten days after receipt of a Claim: (1) request additional supporting data from the Claimant, (2) submit a schedule to the parties indicating when the Architect expects to take action, (3) reject the Claim in whole or in part, stating reasons for rejection, (4) recommend approval of the Claim by the other party or (5) suggest a compromise. The Architect may also, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim.
- B. If the City and Contractor resolve the Claim, the Architect shall prepare a Change Order or other documentation accordingly.
- C. If the City and Contractor do not resolve the Claim after consideration of the foregoing, either party may seek a judicial resolution of any Claim. Any Claim against the City shall comply with the provisions of Neb. Rev. Stat. 15-840 et seq. and other applicable laws relating to claims against the City.

SUBCONTRACTORS

XXXIX. AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- A. The Contractor shall notify the Architect of the names and addresses of the Subcontractors (including those who are to furnish materials or equipment fabricated to a special design) the Contractor proposes to use on the contract. The Contractor shall submit such notification before beginning any subcontracted work.
- B. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the City. The Contractor agrees to be fully responsible to the City for the acts or omissions of Subcontractors and of anyone employed directly or indirectly by the Contractor or Subcontractors. This contract obligation shall be in addition to the liability imposed by law upon the Contractor.
- C. The Contractor agrees to bind every Subcontractor (and every Subcontractor of a Subcontractor) by the terms of the General Conditions and the Special Provisions of the contract, plans, and specifications as far as applicable, including insurance requirements, unless specifically noted to the contrary in a subcontract the City has approved in writing.
- D. The Contractor shall not contract with a proposed Subcontractor to whom the City or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.
- E. If the City or Architect has reasonable objection to a Subcontractor proposed by the contractor, the Contractor shall propose another to whom the City or Architect has no reasonable objection. The Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued. However, no increase in the Contract Sum shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.
- F. The Contractor shall not change a Subcontractor previously selected if the City or Architect makes reasonable objection to such change.
- G. Failure of the City or Architect to reply within ten days after a subcontractor's submittal for approval shall mean the City has no reasonable objection.
- H. By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities that the Contractor, by these Documents, assumes toward the City or Architect. Each subcontract agreement shall preserve and protect the rights of the City and Architect under the Contract Documents for each Subcontractor's Work so that subcontracting thereof shall not prejudice such rights. Such agreements shall allow to the Subcontractor (unless specifically provided otherwise in the subcontract agreement) the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the City. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor shall be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.
- I. Notwithstanding any provision of Subparagraph XXXIX(A), the Contractor shall require a written Subcontract between the Contractor and such Subcontractor (or the Subcontractor and its Sub-subcontractor at any tier) for any part of the Work a Subcontractor or Sub-subcontractor performs. The Contractor shall use or require the use of a form of subcontract satisfactory to the City in all respects for such written agreements. Each such contract shall contain provisions that require the Subcontractor to:
 1. Perform such Work in accordance with the Contract Documents;
 2. Waive all rights the contracting parties may have against one another or that the Subcontractor may have against the City for damages caused by fire or other perils covered by insurance required in contract documents.
 3. Carry and maintain insurance coverage in accordance with the Contract Documents, and to file Certificates of such coverage with the Contractor;
 4. Submit to Contractor or Subcontractor, as the case may be, applications for payment (on a City approved form) together with clearly defined invoices and billings supporting all such applications under each subcontract;
 5. Report, so far as is practicable, unit prices and any other feasible formula for use in determination of the costs of changes in the Work;
 6. Furnish to the Contractor in a timely fashion all information necessary for the preparation and submission of the reports required in the Contract Documents;

7. Continue to perform under its subcontract in the event the Contract is terminated and the City shall take assignment of said contract and request such subcontractor to continue such performance;
8. Remove all debris created by its activities; and
9. Follow Fair Employment Practices and Fair Labor Standards.

XL. CONTINGENT ASSIGNMENT OF SUBCONTRACTS

- A. The Contractor shall automatically assign to the City each subcontract agreement the City accepts by notifying the Subcontractor in writing upon the City's termination of the Contract for cause pursuant to Paragraph LXXIII. Such assignment shall be subject to the prior rights of the surety, if any.
- B. If the Work has been suspended for more than 30 days, the City may equitably adjust compensation for any Subcontractor assigned hereunder.

CHANGES IN THE WORK

XLI. CHANGES

- A. The City or Contractor may accomplish Changes in the Work after execution of the Contract (without invalidating the Contract) by Change Order, Construction Change Directive or order for a minor change in the Work (subject to the limitations stated in Changes In The Work (XLI - XLII) and elsewhere in the Contract Documents.)
- B. The parties shall perform Changes in the Work as provided in the Contract Documents, and the Contractor shall proceed promptly so as to avoid any delay in the Work, unless otherwise provided in such change in the Work.

XLII. CONSTRUCTION CHANGE DIRECTIVES

- A. The City may use A Construction Change Directive in the absence of total agreement on the terms of a Change Order.
- B. If the Construction Change Directive provides for an adjustment to the Contract Sum, the City shall calculate such adjustment based on one of the following methods:
 1. lump sum properly itemized and supported by sufficient substantiating data to permit City evaluation;

2. unit prices stated in the Contract Documents or subsequently agreed upon;
3. cost (to be determined in a manner the parties agree upon) plus a mutually acceptable fixed or percentage fee; or
4. as provided in Subparagraph XLII(E).

- C. Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- D. If the Contractor signs such Construction Change Directive, such signature shall conclusively establish the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining the same. The City shall consider such agreement as immediately effective and shall record such agreement as a Change Order.
- E. If the Contractor does not respond within 10 days or disagrees with the method for adjustment in the Contract Sum, the City shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change. In case of an adjustment that increases the Contract Sum, the expenditures attributable to the change shall include a reasonable allowance for overhead and profit. In such case, and under Clause XLII(B)(3), the Contractor shall keep and present (in such form as the City may prescribe) an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, the City shall pay costs limited only to the following costs directly attributable to the change:
 1. Labor, including social security, old age and unemployment Insurance, fringe benefits required by agreement or custom, and workers' or workmen's compensation Insurance;
 2. Materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
 3. Rents for machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
 4. Premiums for all Bonds and Insurance, permit fees, and sales, use or similar taxes related to the Work; and
 5. Additional supervision and field office personnel.
- F. Pending final determination of costs, the Contractor may include amounts not in dispute in Applications for Payment. For a deletion or change that results in a net decrease in the Contract Sum, the City and Contractor shall use the actual net cost to determine such decrease. When both additions and credits covering related Work or substitutions are involved in a change, the City and Contractor shall figure an allowance for overhead and profit on the basis of net increase, if any, with respect to that change.

- G. When the City and Contractor agree with the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately. Such agreement shall be recorded by preparation and execution of an appropriate Change Order.

TIME

XLIII. PROGRESS AND COMPLETION

- A. Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Contract the Contractor confirms that the Contract Time is a reasonable period for performing the Work.
- B. The Contractor shall not knowingly commence operations on the site or elsewhere prior to the effective date of Insurance required by Paragraphs LIX, LX, LXI, Insurance and Bonds. The effective date of such Insurance shall not change The Work Commencement Date in any event. The Contractor shall notify the City in writing not less than five days before commencing the Work unless the City establishes a different date of commencement by a notice to proceed.
- C. The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

XLIV. DELAYS AND EXTENSIONS OF TIME

- A. If the Contractor is delayed by an act or neglect of the City or Architect, or of an employee of either, or of a separate contractor employed by the City, or by delay the City has authorized in writing, or by other causes that the City determines may justify delay, then the City and Contractor shall extend the Contract Time accordingly by Change Order.
- B. The Contractor shall make such claims in accordance with applicable provisions of Paragraph XXXVII.

XLV. LIQUIDATED DAMAGES

- A. If the Contractor fails to complete the Work prior to the completion date (allowing for any approved extensions of time), the Contractor shall pay Liquidated Damages for each day that the work remains incomplete. The City shall deduct the amount of Liquidated Damages due from the money due the Contractor prior to final payment. If the

remaining amount due the Contractor is less than the total amount of Liquidated Damages, the Contractor shall pay the difference within 10 days. If the Contractor fails to pay such difference, the City shall have the right to recover the difference from the Contractor or his Surety.

- B. Unless specifically amended or modified by special provision, the daily amount of the Liquidated Damages shall be as follows:
1. Contract Sum up to and including \$100,000:
\$100/day
 2. Contract Sum more than \$100,000 up to and including \$500,000:
\$200/day
 3. Contract Sum more than \$500,000 up to and including \$1,000,000
\$300/day.
 4. Contract Sum more than \$1,000,000
\$400 /day.
- C. The Liquidated Damages provided herein are not considered punitive. The Contractor agrees that such damages are predetermined and reasonable amounts to compensate for the detriment to the public and to defray expenses incurred by the City due to the delay in the completion of the project.

PAYMENTS AND COMPLETION

XLVI. CONTRACT SUM

- A. The Contract Sum stated in the Contract (including any adjustments the City authorizes) is the total amount the City shall pay to the Contractor for the Work.
- B. Notwithstanding any other provision of the Contract Documents, the City may withhold any payment to the Contractor hereunder if and for so long as the Contractor fails to perform any of its obligations hereunder or if the Contractor is in default under any terms and conditions of the Contract Documents. Such withholding shall be limited to an amount, sufficient in the reasonable opinion of the City, to cure any such default or failure.

XLVII. SCHEDULE OF VALUES

Before the first Application for Payment, the Contractor shall submit to the Architect and the City a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. Upon agreement, the City and Architect shall use such schedule as a basis for reviewing the Contractor's Applications for Payment.

XLVIII. APPLICATIONS FOR PAYMENT

- A. At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect and the City an itemized Application for Payment for completed operations. Such application shall be notarized and supported by such data substantiating the Contractor's right to payment as the City or Architect may require (such as copies of requisitions from Subcontractors and material suppliers). Such application shall also state the amount of any required retainer related to the application. The Contractor shall certify such application for Payment as true and correct. In addition, such Application for Payment shall contain the Contractor's certification that the Contractor has paid all due and payable bills for the Work to date or that the Contractor shall pay the same from the proceeds of such application.
- B. Such applications may include requests for payment for changes properly authorized by Construction Change Directives but not yet included in Change Orders.
- C. Such applications shall not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material supplier because of a dispute or other reason.
- D. Unless otherwise provided in the Contract Documents, the City shall make payments on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the City, the City shall similarly make payment for materials and equipment suitably stored off the site at a location the parties have agreed upon in writing. The City conditions any such Payment for materials and equipment stored on or off the site upon the Contractor's compliance with measures and actions satisfactory to the City to establish the City's title to such materials and equipment or otherwise protect the City's interest. Such procedures, measures and actions shall include applicable Insurance, storage and transportation to the site for such materials and equipment stored off the site.
- E. The Contractor warrants that title to all Work covered by an Application for Payment shall pass to the City no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment, all Work for which Certificates for Payment have been previously issued and payments received from the City shall be free and clear of liens, Claims, security interests or encumbrances in favor of the Contractor,

Subcontractors, material suppliers, or other persons or entities making a Claim by reason of having provided labor, materials and equipment relating to the Work.

XLIX. CERTIFICATES FOR PAYMENT

- A. The Architect may issue a certificate for Payment to the City, with a copy to the Contractor, for such amount as the Architect determines is properly due. Otherwise, the Architect shall notify the Contractor and City in writing of the Architect's reasons for withholding certification in whole or in part as provided in Subparagraph L(A). The Architect shall take one or the other action within seven days after receipt of the Contractor's Application for Payment.
- B. The issuance of a Certificate for Payment shall constitute the Architect's representation to the City (based on the Architect's observations at the site and the data comprising the Application for Payment) that the Work has progressed to the point indicated and that the quality of the Work complies with the Contract Documents. The foregoing representations are subject to: the Architect's evaluation of the Work for conformance with the Contract Documents upon Substantial Completion; results of subsequent tests and inspections; minor deviations correctable prior to completion; and specific qualifications expressed in writing by the Architect. The Architect's issuance of a certificate for Payment shall further constitute the Architect's representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment shall not be a representation that the Architect has:
 - 1. Made exhaustive or continuous on-site inspections to check the quality or quantity of the Work;
 - 2. Reviewed construction means, methods, techniques, sequences or procedures;
 - 3. Reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the City to substantiate the Contractor's right to payment; or
 - 4. Made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

L. DECISIONS TO WITHHOLD CERTIFICATION

- A. The Architect may decide not to certify payment and may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the City. The Architect may do so when (in the Architect's opinion) the Architect can not make the representations to the City required by Subparagraph XLIX(B). If the Architect is unable to certify payment in the amount of the Application, the Architect shall notify the Contractor and City as provided in Subparagraph XLIX(A). If the Contractor and Architect cannot agree on a

revised amount, the Architect shall promptly issue a Certificate for Payment for any amount the Architect is able to certify. The Architect may nullify any Certificate for Payment previously issued in whole or in part based on subsequently discovered evidence or subsequent observations. The Architect may also nullify or deny certification in whole or in part as may be necessary in the Architect's opinion to protect the City from loss because of:

1. Defective Work not remedied;
2. Third party Claims filed or reasonable evidence indicating probable filing of such Claims;
3. Failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
4. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
5. Damage to the City or another party related to the Work;
6. Reasonable evidence that the Work shall not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages; for the anticipated delay; or
7. Persistent failure to carry out the Work in accordance with the Contract Documents.

- B. When the Contractor causes removal of the above reasons for withholding certification, the Architect shall make such certification for amounts previously withheld.
- C. Regardless of any dispute related to any Certificate of Payment, the Contractor shall expeditiously continue to prosecute the Work.

LI. PROGRESS PAYMENTS

- A. After the Architect has issued a Certificate for Payment, the City shall make payment in the manner and within the time provided in the Contract Documents. The City shall notify the Architect of such payment.
- B. The Contractor shall promptly upon receipt of payment from the City for certified work completed by Subcontractors pay the amount to which said Subcontractor is entitled for such certified portion of the Work, less any percentage portion of the Contractor's retainer applicable to the Subcontractor's work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in similar manner.
- C. The Architect shall, upon request, furnish to a

Subcontractor, if practicable, information regarding percentages of completion or amounts the Contractor has applied for and the City's and Architect's actions thereon related to such subcontractor's work.

- D. Neither the City nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor.
- E. If practicable, the City may make Payment to material suppliers as provided for Progress Payments in Paragraphs LI(B-D).
- F. A Certificate for Payment, a progress payment, or the City's partial or complete use or occupancy of the Project shall not constitute acceptance of Work.

LII. FAILURE OF PAYMENT.

The City shall have seven days from the date the City receives a Certificate of Payment to pay the Contractor. If the City does not pay the Contractor the certified amount within such time, the Contractor may notify the City and Architect in writing that the Contractor will stop the Work until the City makes the required payment. Such notice shall provide at least fourteen additional days after receipt for the City to make payment prior to the Contractor stopping the Work. Upon such Work stoppage, the City and Contractor shall extend the Contract Time accordingly and increase the Contract Sum by the Contractor's reasonable costs of shut-down, delay and start-up. The parties shall complete such changes as provided in Changes In The Work, Paragraphs XLI-XLII.

LIIL. SUBSTANTIAL COMPLETION

- A. When the Contractor considers that the Work (or a portion thereof that the City agrees to accept separately) is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected. The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Upon receipt of the Contractor's list, the Architect shall make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item that does not comply with the Contract Documents (including any items on the Contractor's list) the Contractor shall complete or correct such item upon the Architect's written notification. Once corrected or completed, the Contractor may submit a request to the Architect for another inspection to determine Substantial Completion.
- B. When the Work or designated portion thereof is substantially complete, the Architect may prepare a Certificate of Substantial Completion. Upon the City's approval, such Certificate shall establish: (1) the date of Substantial Completion; (2)

responsibilities of the Contractor for security, maintenance, heat, utilities, damage to the Work and Insurance; and (3) the time for the Contractor to finish all items on the list accompanying the Certificate. Warranties provided in the Contract Documents shall commence on the date of Substantial Completion unless otherwise provided in the Certificate of Substantial Completion. The Contractor shall accept the Certificate of Substantial Completion and the responsibilities assigned in such certificate by signing the same. The Architect shall submit the Certificate to the Contractor for such acceptance.

- C. The City shall make payment for the Work as certified in the Certificate of Substantial Completion upon the Contractor's written application and the Architect's Certificate for payment as provided in the Contract Documents.
- D. The Contractor shall secure and deliver to the City any written warranties and guarantees from Subcontractors, Sub-Subcontractors and suppliers. Such warranties and guarantees shall state the period of warranty as required by the Contract Documents or otherwise as the City has agreed. The Contractor warrants all of the Work regardless of separate warranties by Subcontractors at any tier.

LIV. PARTIAL OCCUPANCY OR USE

- A. The City may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor. Such partial occupancy or use may commence whether or not the portion is substantially complete. Prior to any partial occupancy or use, the City and Contractor shall by separate written agreement provide for the responsibilities assigned to each of them for at least the following: payments, retainer, security, maintenance, heat, utilities, damage to the Work and Insurance. Such written agreement shall also include terms concerning the period for correction of the Work and commencement of warranties. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Subparagraph LIII(A). The Contractor shall not unreasonably withhold consent to any such partial occupancy or use. The City and Contractor shall determine the stage of the progress of the Work by written agreement.
- B. Immediately prior to such partial occupancy or use, the

City, Contractor and Architect shall jointly inspect the subject area. The parties shall use such inspection to determine and record the condition of the Work.

- C. Unless the City and the Contractor agree otherwise in writing, the City's partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of such Work.

LV. FINAL COMPLETION AND FINAL PAYMENT

- A. Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect shall promptly make such inspection. If the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect shall promptly issue a final Certificate for Payment stating that the Work has been completed in accordance with terms and conditions of the Contract Documents. Such final Certificate shall mean the entire balance found to be due the Contractor and noted in said final Certificate is due and payable.
- B. The Architect's final Certificate for Payment shall constitute a further representation that the Contractor has fulfilled the conditions listed in Subparagraph LV(C).
- C. Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect: (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the City or the City's property might be responsible or encumbered (less amounts withheld by City) have been paid or otherwise satisfied, (2) a Certificate evidencing that Insurance required by the Contract Documents to remain in force after final payment is currently in effect and shall not be canceled or allowed to expire unless the insurer or Contractor provides at least 30 days' prior written notice to the City, (3) a written statement that the Contractor knows of no reason that the Insurance shall not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the City, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, Claims, security interests or encumbrances arising out of the Contract as may be designated by the City.
- D. After Substantial Completion, if final completion of the Work is materially delayed through no fault of the Contractor or by Change Orders affecting final completion, the Contractor may apply in writing for the City to make payment of the balance due for that portion of the Work fully completed and accepted as certified by the Architect. Such application, certification and payment shall not terminate the contract. If the remaining balance for Work not fully completed or corrected is less than any retainer

stipulated in the Contract Documents, the Contractor shall submit the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims. As to such portion, the making of final payment shall constitute a waiver of Claims by the City as provided in Subparagraph XXXVII(C).

- E. When the Contractor, any Subcontractor or any material supplier accepts final payment, such acceptance shall constitute a waiver of Claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment. Such payee shall make such waiver in addition to the waiver described in Subparagraph XXXVII(C).

SAFETY

LVI. SAFETY PRECAUTIONS AND PROGRAMS

- A. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.
- B. The Contractor shall immediately notify the City and Architect in writing whenever the Contractor encounters material on the site that the Contractor reasonably believes to be asbestos or polychlorinated biphenyl (PCB).

LVII. SAFETY OF PERSONS AND PROPERTY

- A. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
1. Employees on the Work and other persons who may be affected thereby;
 2. The Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
 3. Other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

- B. The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- C. The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. The Contractor shall take all reasonable and proper precautions to protect persons, animals, and vehicles from injury. The Contractor shall leave fire hydrants and inlets free from encumbrance.
- D. The Contractor shall exercise utmost care when conducting potentially dangerous activities related to the work, including: the use or storage of explosives or other hazardous materials; or the use or storage of potentially dangerous equipment. The Contractor shall conduct such activities only under the supervision of properly qualified personnel.
- E. The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property Insurance required by the Contract Documents) to property referred to in Clauses LVII(A)(2) and LVII(A)(3) caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Clauses LVII(A)(2) and LVII(A)(3), except damage or loss attributable to acts or omissions of the City or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Paragraph XXXI, Indemnification.
- F. The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the City and Architect.
- G. The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.
- H. The Contractor shall provide sanitary Latrines for the Contractor's work force and other persons related to the Work on the Work site. The, type, number and location for such latrine facilities shall be subject to approval by the City.

LVIII. EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act to prevent threatened damage, injury or loss. Additional compensation or extension of time Claimed by the Contractor on account of an emergency shall be determined as provided in Paragraph XXXVII, Claims and Disputes and Paragraphs XLI--XLII, Changes In The Work.

FINANCIAL SECURITY**LIX. CONTRACTOR'S LIABILITY INSURANCE**

- A. The Contractor shall purchase such Insurance as shall protect the Contractor and the City from Claims set forth below which may arise out of or result from the Contractor's operations under the Contract. Such operations shall include operations by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. Such claims shall include the following:
1. Claims under workers' compensation, disability benefit and other similar applicable employee benefit acts;
 2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
 3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
 4. Claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;
 5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
 6. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and
 7. Claims involving contractual liability Insurance applicable to the Contractor's obligations under Paragraph XXXI, Indemnification.

- B. The Contractor shall procure the Insurance required by Subparagraph (A) of this paragraph in the minimum amounts (applicable law or a special condition of the Contract Documents may require greater coverage) as follows:

Worker's Comp

State	Statutory
Federal	Statutory

Auto Liability

Bodily Injury & Property Damage	\$1,000,000
	Combined Single Limit.

Commercial General Liability

Bodily Injury & Property Damage	\$1,000,000
	each occurrence
Aggregate	\$2,000,000
Personal Injury	\$1,000,000
	each occurrence
Contractual Liability	\$1,000,000
	each occurrence
Products and Completed Operations	\$1,000,000
	each occurrence

- C. All Liability Insurance Policies shall provide coverage: (1) on an "occurrence basis" only; (2) by endorsement to add the City of Lincoln, its officials, employees and volunteers as "Additional Insured;" and (3) without interruption from the Work Commencement Date until the date of final payment (as provided in the Contract Documents) or other coverage termination date for any coverage the Contractor is required to maintain after such final payment.
- D. The Contractor shall obtain all Insurance coverage with insurers authorized to do business in the State of Nebraska. The Contractor shall obtain all Insurance coverage with an insurer that has an A.M. Best's Rating of not less than A:VII, unless the City approves otherwise in writing.
- E. The Contractor shall not commence work under this Contract until the Contractor has obtained all Insurance required by the Contract Documents and the City Attorney has approved such Insurance for compliance with the Contract Documents. The Contractor shall not allow any Subcontractor to commence work on any subcontract until the Subcontractor has likewise obtained all similar Insurance required of the Subcontractor.

- F. The Contractor shall file all Certificates of Insurance with the Risk Management Office of the City of Lincoln on the standard ACORD CERTIFICATE OF INSURANCE form showing the specific limits of Insurance coverage required and any deductibles required. Such Certificate shall specifically state the Insurance policies are endorsed to require the insurer to provide the City of Lincoln 30 days' notice of cancellation, failure to renew or any material reduction of Insurance coverage. If any of the foregoing Insurance coverage is required to remain in force after final payment and is reasonably available, the Contractor shall submit an additional Certificate evidencing continuation of such coverage with the final Application for Payment as required by Subparagraph LV(C). The Contractor shall immediately notify the City of any material reduction or other changes related to any required coverage.

LX. PROPERTY INSURANCE

- A. Where buildings or structures are to be constructed under this Contract, the Contractor shall provide and maintain "all risk" property Insurance provided on a "completed value" basis, covering such building or structure to 100% of the insurable value thereof. Such Insurance shall contain a "waiver of occupancy" endorsement. The insurer shall pay losses, if any, to the City of Lincoln and Contractor as their interest may appear. The Contractor shall file a Certificate of Insurance evidencing such Insurance coverage with the Risk Management Office of the City of Lincoln as soon as any such building or structure becomes insurable until title for such building or structure passes to the City. Such Certificate shall show that the City Attorney has approved such Insurance as represented on the Certificate for compliance with the Contract Documents. See Also: Contractor's obligations and assumption of risk in Subparagraph XXV.
- B. Waivers of Subrogation. The City and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by property Insurance obtained pursuant to this Paragraph LX or other property Insurance applicable to the Work, except such rights as they have to proceeds of such Insurance held by the City as fiduciary. The City or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors, if any, and the subcontractor, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers

each in favor of other parties enumerated herein. The policies shall provide such waivers of Subrogation by endorsement or otherwise. A waiver of Subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the Insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

LXI. PERFORMANCE BOND AND PAYMENT BOND

- A. Within ten days after the acceptance of the bid, the Contractor shall furnish, on forms provided by the City, construction performance and construction payment Bonds, in a sum not less than the Contract Sum, executed by the Contractor and by a corporate surety company authorized to transact business in the State of Nebraska. Such Bonds shall be conditioned upon the faithful performance of all the terms and conditions of the Contract Documents, including the holding harmless of the City from failure to do so, and including the making good of any and all guarantees that the Contract Documents may require and the construction payment Bonds shall be further conditioned upon the payment of all laborers and material suppliers used in the performance of the Contract, including Insurance premiums and interest.

TESTING AND CORRECTING WORK

LXII. TESTS AND INSPECTIONS

- A. The Contractor shall conduct or arrange for any tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction at appropriate times. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the City, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The City shall bear costs of tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded.
- B. If the Architect, City or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Subparagraph LXII(A), the City shall instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the City. The City shall bear such costs except as provided in Subparagraph LXII(C).
- C. If such procedures for testing, inspection or approval under Subparagraphs LXII(A-B) reveal failure of the portions of the Work

to comply with requirements established by the Contract Documents, the Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses.

- D. The Contractor shall secure all required Certificates of testing, inspection or approval unless the Contract Documents require otherwise. The Contractor shall promptly deliver such Certificates to the Architect.
- E. The Contractor shall furnish, at no expense to the City, such samples of materials as may be required by the Architect or the City for testing. The Contractor shall bear any expense for retesting, required to establish the quality or acceptability of the materials in question.
- F. The Contractor shall not install material of any kind in the project until the Architect has inspected and approved such materials.
- G. The City reserves the right to retest all materials, prior to incorporation into the work, at the City's expense. The City may then reject all materials that, when retested, do not comply with the Contract Documents.
- H. The Contractor shall conduct or arrange for tests or inspections conducted pursuant to the Contract Documents promptly to avoid unreasonable delay in the Work.

LXIII. UNCOVERING OF WORK

- A. If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, the Contractor shall uncover the same for the Architect's observation upon the written request of the Architect. The Contractor shall replace or restore such uncovered Work at the Contractor's expense without any adjustment to the Contract Time.
- B. If a portion of the Work has been covered that the Architect has not specifically requested to observe prior to its being covered, the Architect may request to see such Work. Such request shall be in writing and approved by the City. Upon such request, the Contractor shall uncover the specified Work. If such Work is not in accordance with the Contract Documents, the Contractor shall pay such costs unless the condition was caused by the City. If such Work is in accordance with the Contract Documents, the City shall pay such costs.

LXIV. CORRECTION OF WORK

- A. The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby.
- B. Unless specified otherwise in the terms of an applicable special warranty required by the Contract Documents, the Contractor shall warrant the work for a period of one year after: Substantial Completion of the Work or a designated portion thereof; or the date of commencement of warranties established under Subparagraph LIV(A). During such warranty period, if the City discovers that any of the Work is not in accordance with the Contract Documents, the City shall notify the Contractor in writing. The City shall give such notice promptly after discovery of the condition. Upon such notice, the Contractor shall promptly correct the work, at the Contractor's expense, unless the City has previously given the Contractor a written acceptance of such condition. The Contractor shall extend the warranty period for any portions of Work first performed after Substantial Completion. The Contractor shall extend the warranty period for the number of days between Substantial Completion and the actual completion of such Work. All obligations under this Subparagraph LXIV(B) shall survive acceptance of the Work under the Contract and termination of the Contract.
- C. The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are not corrected by the Contractor nor accepted by the City.
- D. If the Contractor fails to correct non-conforming Work within a reasonable time, the City may correct it in accordance with Paragraph IX. If the Contractor does not proceed with correction of such non-conforming Work within a reasonable time fixed by written notice from the Architect, the City may remove it and store the salvageable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten days after written notice the City may upon ten additional days' written notice sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages owed by the Contractor, including compensation for the Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs owed by the Contractor, the City shall automatically reduce the Contract Sum by the deficiency. If payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the City.

E. The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the City or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

F. Nothing contained in this Paragraph LXIV shall establish a period of limitation with respect to other obligations that the Contractor might have under the Contract Documents. The one year warranty period as described in Subparagraph LXIV(B) relates only to the specific obligation of the Contractor to correct the Work and has no relationship to the time within which the City may enforce the Contractor's obligation to comply with the Contract Documents, nor to the time within which the City may commence proceedings to establish the Contractor's liability other than specifically to correct the Work.

LXV. ACCEPTANCE OF NON-CONFORMING WORK

If the City elects in writing to accept Work that is not in accordance with the requirements of the Contract Documents, the City may do so instead of requiring its removal and correction. Upon such election, the City and Contractor shall reduce the Contract Sum as appropriate and equitable. The City and Contractor shall make such adjustment whether or not the City has made final payment under the Contract Documents. The Contractor shall pay the difference, if any, to the City within 10 days from such adjustment.

MISCELLANEOUS TERMS

LXVI. GOVERNING LAW

The Contract shall be governed by the laws of the State of Nebraska.

LXVII. SUCCESSORS AND ASSIGNS

The City and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto as to covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign or delegate the Contract as a whole without written consent of the other. If either party attempts to make such an assignment or delegation without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

LXVIII. WRITTEN NOTICE

The City, Contractor or Architect may deliver written notice in person to the individual; to a member of the firm or entity; or to an officer of the corporation for which it was intended. Written notice may be delivered by registered or certified mail to the last business address known to the party giving notice. Delivery by either method is hereby acknowledged as sufficient and adequate service of any written notice related to the Contract.

LXIX. RIGHTS AND REMEDIES

A. Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to duties, obligations, rights and remedies otherwise imposed or available by law.

B. No action or failure to act by the City, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

LXX. COMMENCEMENT OF STATUTORY LIMITATION PERIOD

A. Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;

B. Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and

C. After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any warranty provided under Paragraph XVII, the date of any correction of the Work or failure to correct the Work by the Contractor under Paragraph LXIV, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or City, whichever occurs last.

D. Notwithstanding any provision herein to the contrary, no applicable statute of limitations shall commence for any portion of the Work that is not in accordance with the requirements of the Contract Documents, that would not be visible or apparent upon conducting a reasonable investigation, and that is not discovered by the City until after the date that would otherwise be the date of commencement of the applicable statute of limitations. In such case, the applicable statute of limitations shall commence on the date of such discovery by the City.

LXXI. INDEPENDENT CONTRACTOR

The City is interested only in the results obtained and Contractor shall perform as an independent contractor with the sole control of the manner and means of performing the Work required under the Contract. Contractor shall complete the Contract according to its own means and methods of work, which shall be in the exclusive charge and control of Contractor, and which shall not be subject to control or supervision by the City except as to the results of the Work. Contractor is, for all purposes arising out of the Contract, an independent contractor, and the Contractor or any Subcontractor, agent, employee or representative and employees or agents of any of them shall not be deemed an employee of the City. It is expressly understood and agreed that Contractor shall in no manner be entitled to any benefits to which the City's employees are entitled including, but not limited to, overtime, any retirement benefits, workers' compensation benefits and injury leave, or other benefits.

TERMINATION OR SUSPENSION

LXXII. TERMINATION BY THE CONTRACTOR

A. The Contractor may terminate the Contract if the Work is stopped for a period of 30 days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor, for any of the following reasons:

1. Issuance of an order of a court or other public authority having jurisdiction;
2. An act of government, such as a declaration of national emergency, making material unavailable;
3. The failure of the Architect to issue a certificate for Payment when the Architect has not notified the Contractor of the reason for withholding certification as provided in Subparagraph XLIX(A), or the failure of

the City to make payment on a Certificate for Payment within the time stated in the Contract Documents; or

4. The City's repeated suspensions, delays or interruptions as described in Paragraph LXXIV constitute in the aggregate more than 100 percent of the total number of days scheduled for completion or 120 days in any 365-day period, whichever is less.

B. If one of the above reasons exist; the Contractor may upon seven additional days' written notice to the City and Architect, terminate the Contract and recover from the City payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

C. If the City has persistently failed to fulfill obligations important to the progress of the Work under the Contract Documents, causing the Contractor to stop the Work for a period of 60 days through no act or fault of the Contractor (or a Subcontractor or their agents or any other persons performing portions of the Work under the contract with the Contractor) the Contractor may, upon seven additional days' written notice to the City and the Architect, terminate the Contract and recover from the City as provided in Subparagraph LXXII(B)

LXXIII. TERMINATION BY THE CITY FOR CAUSE

A. The City may terminate the Contract if the Contractor:

1. Refuses or fails to supply enough properly skilled workers or proper materials;
2. Fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
3. Disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
4. Otherwise commits a substantial breach of any provision of the Contract Documents.

B. When any of the above reasons exist, the City may without prejudice to any other rights or remedies of the City may (after giving the Contractor and the Contractor's surety, if any, seven days' written notice) terminate employment of the Contractor. In addition the City may (subject to any prior rights of the surety):

1. Take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
2. Accept assignment of subcontracts pursuant to Paragraph XL; and
3. Finish the Work by whatever reasonable method the City may deem expedient.

- C. When the City terminates the Contract for one of the reasons stated in Subparagraph LXXIII(A), the Contractor shall not receive further payment until the Work is finished.
- D. If the unpaid balance of the Contract Sum exceeds the costs of finishing the Work, (including compensation for the Architect's services and expenses made necessary thereby) such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the City. The Architect shall certify any amount to be paid to the Contractor or City upon application, and this obligation for payment shall survive termination of the Contract.

LXXIV. SUSPENSION BY THE CITY FOR CONVENIENCE

- A. The City may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the City may determine.
- B. The City and Contractor shall make an adjustment for increases in the cost of the Contract caused by suspension, delay or interruption. Such adjustment shall include a reasonable profit on the increased cost. No adjustment shall be made to the extent that:
1. Performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
 2. An equitable adjustment is made or denied under another provision of this Contract.
- C. Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

LXXV. TERMINATION BY THE CITY FOR CONVENIENCE

- A. The City may at its option, terminate this Contract in whole or in part at any time without cause by written notice thereof to the Contractor.
- B. Upon any such termination, the Contractor agrees to waive any claims for damages, including loss of anticipated profits, on account thereof, and as the sole right and remedy of the Contractor, the City shall pay Contractor in accordance with this Paragraph. The provisions of the Contract which by their nature survive final acceptance of the Work, shall remain in full force and effect after such termination to the extent provided in such provisions.

- C. Upon receipt of any such notice of termination, the Contractor shall, unless the Notice directs otherwise, immediately:
1. Discontinue the Work to the extent specified by the City
 2. Place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of that portion of the Work, if any, the City has directed not to be discontinued;
 3. Promptly make every reasonable effort to procure cancellation upon satisfactory terms as determined by the City of all orders and subcontracts not related to that portion of the Work, if any, the City has directed not to be discontinued;
 4. Do only such other activity as may be necessary to preserve and protect work already in progress and to protect materials and plants and equipment on the Project Site or in transit thereto.
- D. Upon such termination, the obligations of the Contract shall continue as to portions of the Work already performed and as to bona fide obligations the Contractor assumed prior to the date of termination.
- E. Upon termination, the City shall pay the Contractor the full cost of all Work properly done by the Contractor to the date of termination not previously paid for by the City. If at the date of such termination the Contractor has properly prepared or fabricated off site any goods for subsequent incorporation in the Work, the City may direct the Contractor to deliver such goods to the Site or to such other place as the City may reasonably determine, whereupon the City shall pay to the Contractor the cost for such goods and materials.

SAMPLE

CONTRACT DOCUMENTS

LANCASTER COUNTY

NEBRASKA

FOR

SPECIFICATION “#”, “proj name”

CONTRACTOR: “contractor”

LANCASTER COUNTY, NEBRASKA

CONTRACT AGREEMENT

THIS CONTRACT, made and entered into this ____day of ____, 200"yr", by and between "**contractor**", "**address**", "**csz**" hereinafter called contractor, and the Lancaster County, Nebraska, hereinafter called the County.

WITNESS, that:

WHEREAS, the County has caused to be prepared, in accordance with law, Specifications, Plans, and other Contract Documents for the Work herein described, and has approved and adopted said documents and has caused to be published an advertisement for and in connection with said Work, to-wit:

Specification "#", "proj name" - "description"

and,

WHEREAS, the Contractor, in response to such advertisement, has submitted to the County, in the manner and at the time specified, a sealed Proposal in accordance with the terms of said advertisement; and,

WHEREAS, the County, in the manner prescribed by law has publicly opened, read aloud, examined, and canvassed the Proposals submitted in response to such advertisement, and as a result of such canvass has determined and declared the Contractor to be the lowest responsible bidder for the said Work for the sum or sums named in the Contractor's Proposal, a copy thereof being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the sums to be paid to the Contractor and the terms of the agreements herein contained, the Contractor and the County have agreed and hereby agree as follows:

The Contractor agrees to (a) furnish all tools, equipment, supplies, superintendence, transportation, and other construction accessories, services, and facilities; (b) furnish all materials, supplies, and equipment specified to be incorporated into and form a permanent part of the complete work; c) provide and perform all necessary labor in a substantial and workmanlike manner and in accordance with the provisions of the Contract Documents; and (d) execute construct, and compete all Work included in and covered by the County's award of this Contract to the Contractor, such award being based on the acceptance by the County of the Contractor's Proposal, or part thereof, as follows:

Specification "#"

CONSTRUCTION SITE CONTROL: To the extent permitted by law, the County relinquishes control of the construction site to the Contractor and its subcontractors during the period of construction. The design construction, placement of barricades, and posting of warning signs in the area of construction will be the responsibility of the Contractor. This shall include the placement of construction equipment and any obstacles which are created as a result of the construction project. To the Extent permitted by law, the Contractor expressly accepts control of the construction site, such control shall include, but not be limited to, barricades, road crossing, warning signs, construction equipment and any obstacles created during construction of the project.

EQUAL EMPLOYMENT OPPORTUNITY: In connection with the carrying out of this project, the contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, disability, age or marital status. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other compensation; and selection for training, including apprenticeship.

The County agrees to pay to the Contractor for the performance of the Work embraced in this Contract, the Contractor agrees to accept as full compensation therefor, the following sums and prices for all Work covered by and included in the Contract award and designated above, payment thereof to be made in the manner provided by the County: \$"amt"

"written"

The Work included in this Contract shall begin by "begin". The Work shall be completed

Liquidated damages of _____ per calendar day will be deducted from the Contractor's final estimate if the work is not completed prior to the (1) completion date; or (2) the expiration of the time limit specified above; or (3) the termination of all time extensions granted by the County.

GUARANTEE:

A performance bond in the full amount of the contract shall be required for all construction contracts. This bond shall remain in effect during the guarantee period as stated in the specifications.. Once the project is completed, the contractor may submit a maintenance bond in place of the performance bond.

The Contract Documents comprise the Contract, and consist of the following:

1. The Instructions to Bidders
2. The Accepted Proposal
3. The Contract Agreements
4. The Specifications
- * 5. The Standard Specifications
 - a. General Conditions
 - b. General Specifications
 - c. Construction & Materials Specifications
- ** 6. The Plans (including the Schedule of Approximate Quantities)
7. The Construction Bonds
8. The Special Provisions (including Attachment A - Tax Assessment Certification)

* If project includes paving, water, sewer, sidewalk, lighting or traffic signal work, the Standard Specifications, including the General Conditions, the General Specifications, and the Construction and Materials Specifications will apply, which are on file in the office of the County Clerk. Copies may be obtained at the office of the Purchasing Agent.

** The following is an enumeration of the Plans, which are entitled: "#"

These Contract Agreements, together with the other Contract Documents herein above mentioned, form this Contract, and the are as fully a part of the Contract as if hereto attached or herein repeated.

The Contractor and the County hereby agree that all the terms and conditions of this Contract shall by these presents be binding upon themselves, and their heirs, administrators, executors, legal and personal representatives, successors, and assigns.

IN WITNESS WHEREOF, the contractor and the County do hereby execute this contract.

EXECUTION BY LANCASTER COUNTY, NEBRASKA

CONTRACT APPROVED AS TO FORM:

COUNTY OF LANCASTER, NEBRASKA

Lancaster County Attorney

Chairperson, Board of Commissioners

EXECUTION BY CONTRACTOR

IF A CORPORATION:

ATTEST:

Secretary (SEAL)

"Contractor"
Name of Corporation

"Address"
"csz"
Address

By: _____
Duly Authorized Official

Legal Title of Official

IF OTHER TYPE OF ORGANIZATION:

Name of Organization

Type of Organization

Address

By: _____
Member

By: _____
Member

IF AN INDIVIDUAL:

Name

Address

Signature

COMMENTARY TO ACCOMPANY CONSTRUCTION BONDS

A. GENERAL INFORMATION

There are two types of construction bonds that are required by statutes for public work in many jurisdictions and are widely used for other projects as well.

Construction Performance Bond
Construction Payment Bond

The Construction Performance Bond is an instrument that is used to assure the availability of funds to complete the construction.

The Construction Payment Bond is an instrument that is used to assure the availability of sufficient funds to pay for labor, materials and equipment used in the construction. For public work the Construction Payment Bond provides rights of recovery for workers and suppliers similar to their rights under the mechanics lien laws applying to private work.

The objective underlying the re-writing of construction bond forms was to make them more understandable to provide guidance to users. The intention was to define the rights and responsibilities of the parties, without changing the traditional rights and responsibilities that have been decided by the courts. The new bond forms provide helpful guidance regarding time periods for various notices and actions and clarify the extent of available remedies.

The concept of pre-default meeting has been incorporated into the Construction Performance Bond. All of the participants favored early and informal resolution of the problems that may precipitate a default, but some Surety companies were reluctant to participate in pre-default meetings absent specific authorization in the bond form.

The responsibilities of the Owner and the options available to the Surety when a default occurs are set forth in the Construction Performance Bond. Procedures for making a claim under the Construction Payment Bond are set forth in the form.

EJCDC recommends the use of two separate bonds rather than a combined form. Normally the amount of each bond is 100 percent of the contract amount. The bonds have different purposes and are separate and distinct obligations of the Surety. The Surety Association reports that the usual practice is to charge a single premium for both bonds and there is no reduction in premium for using a combined form or for issuing one bond without the other.

B. COMPLETING THE FORMS

Bonds have important legal consequences; consultation with an attorney and a bond specialist is encouraged with respect to federal, state and local laws applicable to bonds and with respect to completing or modifying the bond forms.

Both bond forms have a similar format and the information to be filled in is ordinarily the same on both bonds. If modification is necessary, the modifications may be different.

The bond forms are prepared for execution by the Contractor and the Surety. Evidence of authority to bind the Surety is usually provided in the form of a power of attorney designating the agent who is authorized to sign on behalf of the Surety. The power of attorney should be filed with the signed bonds.

Each bond must be executed separately since they cover separate and distinct obligations.

Preferably the bond date should be the same date as the contract, but in no case should the bond date precede the date of the contract.

To accompany the Construction Performance Bond (EJCDC No.1910-28A) and the Construction Payment Bond (EJCDC No. 1910-28B)
Prepared by the Engineers' Joint Contract Documents Committee

CONSTRUCTION PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Contractor (Name and Address):

"Contractor"

"Address"

"Csz"

Surety (Name and Principal Place of Business):

Owner (Name and Address):

Lancaster County

555 South 10th Street

Lincoln, NE 68508

CONSTRUCTION CONTRACT

Date: "begin"

Amount: \$"amt"

Description (Name and Location):

"#", "proj name" - "description"

BOND

Date (Not earlier than Construction Contract Date):

"begin"

Amount: \$"amt"

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

Signature: _____

Name and Title:

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

SURETY

Company: (Corp. Seal)

Signature: _____

Name and Title:

Signature: _____

Name and Title:

EJCDC NO. 1910-28a (1984 Edition)

Prepared through the joint efforts of The Surety Assoc. of America, Engineers' Joint Contract Documents Committee, The Associated General Contractors of America, and the American Institute of Architects.

1. The Contractor and the Surety, jointly and severally, bind themselves their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default and
 - 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Sub-paragraph 3.1; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract, or
 - 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors: or
 - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default, or
 - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to the Owner and as soon as practicable after the amount is determined tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify the Owner citing reasons therefor.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4 and the Owner refuses payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
 - 6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
 - 6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related sub-contracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions.
 - 12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
 - 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

CONSTRUCTION PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Contractor (Name and Address):

"Contractor"

"Address"

"Csz"

Surety (Name and Principal Place of Business):

Owner (Name and Address):

Lancaster County

555 South 10th Street

Lincoln, NE 68508

CONSTRUCTION CONTRACT

Date: **"Begin"**

Amount: **\$"amt"**

Description (Name and Location): **"#", "proj name" - "description"**

BOND

Date (Not earlier than Construction Contract Date): **"begin"**

Amount: **\$"amt"**

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

SURETY

Company: (Corp. Seal)

Signature:_____

Name and Title:

Signature:_____

Name and Title:

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

SURETY

Company: (Corp. Seal)

Signature:_____

Name and Title:

Signature:_____

Name and Title:

1. The Contractor and the Surety, jointly and severally, bind themselves their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
 2. With respect to the Owner, this obligation shall be null and void if the Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
 3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
 4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who do not have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof to the Owner, stating that a claim is being made under this Bond and with substantial accuracy the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with the Contractor:
 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed, and
 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
 5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
 6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2 Pay or arrange for payment of any undisputed amounts.
 7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
 8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond.
- By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to the funds for the completion of the work.
9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
 11. No suite or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.1 (iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
 12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.
 14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
 15. DEFINITIONS
 - 15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials, or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
 - 15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY - NAME, ADDRESS AND TELEPHONE)

AGENT OR BROKER: OWNER'S REPRESENTATIVE (ARCHITECT, ENGINEER OR OTHER PARTY)

INSURANCE CLAUSE FOR ALL COUNTY CONTRACTS

The Contractor shall indemnify and save harmless, to the fullest extent allowed by law, Lancaster County, Nebraska from and against all losses, claims, damages and expenses, including attorney's fees, arising out of or resulting from the performance of the contract that results in bodily injury, sickness, disease, death or injury to or destruction of tangible property, including the loss of use resulting therefrom and is caused in whole or in part by the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

Contractor shall not commence work under this contract until he has obtained all insurance required under this Section and such insurance has been approved by LANCASTER COUNTY, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been so obtained and approved.

- A. Workers' Compensation Insurance and Employer's Liability Insurance: The Contractor shall take out and maintain during the life of this contract the applicable statutory Worker's Compensation Insurance, and in the case of any work sublet, the Contractor shall require the subcontractor similarly to provide statutory Worker's Compensation Insurance for the latter's employees. Coverage shall be provided by an insurance company authorized to write such insurance in all states where the Contractor will have employees located in the performance of this contract, and the Contractor shall require each of his subcontractors similarly to maintain Employer's Liability Insurance similarly to the Contractor.

Workers' Compensation - Required limits:

Coverage A - Coverage will include Statutory requirements

Coverage B - Employers Liability

\$100,000 Each Person

\$100,000 Each Person by Disease

\$500,000 Policy Limit - Disease

B. General Liability Insurance

1. The Contractor shall maintain during the life of this contract, Commercial General Liability Insurance, naming and protecting him and Lancaster County against claims for damages resulting from (a) bodily injury, including wrongful death, and (b) property damage which may arise from operations under this contract whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them. The insurance requirements are:

Commercial General Liability (form CG0001 or equivalent) with limits of:

\$1,000,000 Each Occurrence

\$1,000,000 Personal Injury

\$2,000,000 Products/Completed Operations

\$2,000,000 General Aggregate

and:

- 1.1 Coverage shall include Contractual Liability coverage insuring the contractual exposure as addressed in this contract.

- 1.2 There shall be no exclusion or limitation for the Explosion (X), Collapse ©) and Underground (U) hazards.
- 1.3 Coverage shall also include Products/Completed Operations.
- 1.4 **Lancaster County shall be named as Additional insured (CG2010 or equivalent).**
- 1.5 The Commercial General Liability coverage shall be endorsed with the Designated Construction Project(s) General Aggregate Limit endorsement (CG 25 03 or equivalent).

C. Automobile Liability Insurance: The Contractor shall take out and maintain during the life of the contract such Automobile Liability Insurance as shall protect him against claims for damages resulting from (a) bodily injury, including wrongful death, and (b) property damage which may arise from the operations of any owned, hired, or now-owned automobiles used by or for him in any capacity in connection with the carrying out of this contract. The minimum acceptable limits of liability to be provided by such Automobile Liability Insurance shall be as follows:

Bodily Injury and Property Damage	1,000,000 Combined Single Limit
-----------------------------------	---------------------------------

D. Builder's Risk Insurance: **(For Building Construction Contracts Only)** Unless otherwise specified where buildings are to be constructed under this contract, the Contractor shall provide coverage for all direct physical loss (also known as "Special Causes of Loss"). Such insurance shall be written on a Replacement Cost basis covering such building in the amount equal to one-hundred percent (100%) of the contract amount (minimum) as specified herein. Losses, if any, shall be made payable to LANCASTER COUNTY and Contractor as their interest may appear. A certificate of insurance evidencing such insurance coverage shall be filed with LANCASTER COUNTY by the time work on the building begins and such insurance shall be subjected to the approval of LANCASTER COUNTY.

E. Minimum Scope of Insurance: All Liability Insurance policies shall be written on an "Occurrence" basis only. All insurance coverage are to be placed with insurers authorized to do business in the State of Nebraska and must be placed with an insurer that has A.M. Best's Rating of no less than A:VII unless specific approval has been granted by LANCASTER COUNTY.

F. Certificate of Insurance: All Certificates of Insurance shall be filed with LANCASTER COUNTY on the standard ACCORD CERTIFICATE OF INSURANCE form showing the specific limits of insurance, coverage modifications and endorsements required by the preceding Sections A, B, C, D and showing LANCASTER COUNTY is an additional insured where required. Such certificate shall specifically state that insurance policies are to be endorsed to require the insurer to provide LANCASTER COUNTY thirty days, notice of cancellation non-renewal or any material reduction of insurance coverage.

The original certificate shall be provided to Lancaster County as designated and a copy to: Office of Risk Management, Lancaster County (555 So. 9th Street, Lincoln, NE 68508)

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Certified Statement Pursuant to Neb. Rev. Stat. § 77-1323
SPECIFICATION “#”, “proj name”

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